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Medical Progress in 1918

COMMENTS ON THE PROGRESS OF SURGERY DURING THE YEAR 1918.

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The armistice is signed. Peace is assured. Yet this is but the culmination of a year of stress and strain in which the combined energies of all classes have been concentrated upon winning the war. Nothing else counted; and every field of endeavor for the time being has put aside its individual ambitions to merge its activities in the common purpose, for the common welfare. The men of the medical profession have shown their mettle. The great adventure with its irresistible appeal to the imagination has lured the best surgeons of all lands to the service of the army, the navy and the Red Cross: Thus the men upon whom the profession depends for its original and creative output have transferred their activities to the Camp, the Cantonment and the Base Hospital.

The gist of surgical progress must therefore center about procedures immediately concerned with the injuries of war. Notable medical contributions during the past year have been meager—there has been a steady decline since the beginning of the war. This year marks its lowest ebb.

The war however, has not been wholly barren of beneficent results. It has provided a great human laboratory in which traumatic surgery has been the problem upon which has been concentrated the best brains and the united efforts of the maturest surgical thought. Into the laboratory has come a wealth of material that has afforded ample opportunity to place on trial the various methods and appraise results.

Out of the judicial sifting of the evidence should come some fundamental principles, and a proper estimate of values should place the various procedures in their proper sequence.

In choosing methods our basis of treatment is sound only when we are wholly aware of the appropriateness of the measure employed.

To use methods at random is only to defeat the result and to discredit the method. In no field is this principle so clearly defined as in the treatment of wounds.

The four long years of the war have furnished ample material, it has stimulated unprecedented endeavor, it has crystallized surgical thought, it has forced the transient into the background, it has focused into the field of the permanent certain fundamentals which will survive as static principles.

First: Mechanical sterilization of a wound is superior to all forms of chemical sterilization. This is the very gist of all the debate that has waxed warm over the infected wound during the war. The method of choice is to do a *debridement* of the devitalized and infected tissues along the wound tract. It matters not how extensive the wound may be, if there is no contra-indication complete excision of all damaged tissue immediately converts a potentially infected field into a wound that usually eventuates in primary healing.

It is evident that this procedure at once forestalls many complications—thus long periods of suppuration, fatal complications, especially gas gangrene, and extensive cicatrices are prevented.

This method is radical but it is rational. It is amazing to find the large percentage of wounds that can be secondarily closed without suppuration.

Again, there are biological factors in the tissues themselves, more potent than any chemical disinfectants—these are the anti-bacteriocidal action of the tissues, and their inherent reparative forces which will perform their own beneficent office of salvage if their vital function remains unimpaired by too much interference on the part of the surgeon, and meddlesome disinfection.

Second: Chemical Disinfectants—The function of chemical disinfectants is evidently to destroy microbes already present in the tissues and producing suppuration. Chemical disinfectants are not indicated where mechanical sterilization is effective; but if a chemico-therapy which sterilizes the wound is indicated, then an antiseptic must be chosen which acts on the microbes without harming the tissues—this is essential. And, again, a chemical must be chosen which will not only destroy microbes suspended in water, but microbes in the midst of protein substances—blood, serum and pus.

There are two procedures which seem to fulfill these conditions:

a. *The use of ether in the disinfection of wounds.* As the result of extensive observation in treating the

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wounds of war, we have been impressed with the value of ether in washing out the wound, and the application of ether-soaked gauze as a dressing. While the rationale of this procedure has not been scientifically demonstrated, the general consensus of opinion is that the action of ether is antiseptic and hemostatic, with a possible specific action upon the bacillus of gas gangrene. We are inclined to believe that its value probably resides in its action as a lymphagogue. By stimulating the flow of lymph there is inaugurated a mechanical flushing and cleansing of the wounded tissue. From practical experience we found that infected wounds were transformed into clean wounds in a remarkably short time. Suppurating wounds thus treated healed promptly.

b. *The Carrel-Dakin Method of treating infected wounds* has been on trial for some time. It has had a thorough testing during the war, and we believe that there is now convincing proof that septic wounds can be rendered surgically aseptic by this treatment. The method however, is complicated since it implies the application of Dakin's solution by means of an elaborate technic which has been worked out with detailed exactness. In a word, the Carrel technic fits the Dakin solution—one is a complement of the other, and neither can be altered without compromising the result.

Fractures: (Manual of Splints and Appliances for the Medical Department of the U. S. Army.) One of the big contributions which the war has made to surgical practice is the simplification and standardization of the methods of treating fractures. We believe there is no branch of surgery which will be more permanently affected by the rich experience gathered from the war than the treatment of fractures. Much that has been gleaned in war surgery will be forgotten in civil practice. The inadequate technic under battle conditions is wholly unnecessary in the refinements of civil practice. The army surgeon will return to civil life satisfied that the higher development of his art can only flourish under peace conditions, yet out of much that is transitory some permanent contributions are to be recorded.

Four months after war was declared by the United States a Board of Medical Officers was directed "to investigate and report upon the advisability of standardizing certain appliances to be employed and issued by the Medical Department of the U. S. Army." This board met as directed and recommended that certain splints and appliances should be standardized and adopted by the American Army.

The aim of the board has been to achieve: "Efficiency and correct mechanical principles; simplicity of design and low cost of construction, so that sufficient quantities may be always available; transportability, in order that an efficient splint may be applied at the front and remain in situ until the patient reaches the more or less permanent base hospital."

It is remarkable to note that this end has been achieved by the adoption of six standard types of splints—three for the upper and three for the lower extremity.

It is surprising to observe how simple the fracture problem becomes when reduced to its lowest practical terms. The apparatus is uncomplicated and comparatively cheap. There is no need of any special training to insure familiarity with its efficient application. It is only necessary to appreciate the mechanical principles underlying these methods—namely, fixation and traction, and to follow the simple directions in applying the

splints to the living model. This is a substantial advance, for while the fundamental principles of fracture treatment have been well taught, the application of these principles has been crude and inadequate.

How to arrive at an adequate reduction and a satisfactory retention has been obscured by the multiplicity of apparatus reflecting the ingenuity of a host of operators, each having some point of exceptional merit but contributing to ultimate confusion and the messing of a problem which should be comparatively simple.

The war has also featured a mental attitude which the surgeon needs to acquire—the habit of thinking in terms of ultimate function. A healed wound is quite incomplete unless it predicates a working man. The aim in treating fractures must be something beyond the mere attainment of a perfect anatomical result—there must be in addition *physiological restoration*. If all that we can secure in a broken bone is solidity, our treatment is sadly deficient. We must aim for bony integrity, which implies restoration of structure plus function.

General Analgesia: We had concluded that with the addition of rectal anaesthesia to our resources the last step in general analgesia had been reached—yet we find another route still remains. Gwathmey and Karsner demonstrate a new route in a striking article on *General Analgesia* (*Jour. Am. Med. Assn.*, LXX, 993, 1918). The aim is to secure general insensibility to pain with retention of consciousness by the use of 50 per cent. ether in liquid petrolatum or other bland oil. The analgesia is swallowed between mouthfuls of port wine. Four drams of ether is the stomach dose. Clinically this has been used for minor operations and painful dressings. The rationale has not yet been fully worked out.

The value of the preoperative purge has excited some discussion, nor is it by any means a trivial consideration. Alvarer presents his views in an article, *Is Purgation Before Operation Justifiable?* (*Surg. Gyn and Obst.*, XXVI, 651, 1918.) He approaches the problem by experiment as well as from the clinical side. The author finds many reasons for abandoning the custom. Purgatives may disturb the salt balance so that post-operative hemorrhage and vomiting are favored. Intestinal toxins may be liberated and absorbed; there is an increased growth of bacteria; the passage of food may be accelerated; sleep may be disturbed and the action of drugs is prejudiced. Laxatives are not even recommended and enemata are required only in certain cases.

Comment: It cannot be denied that preoperative purging has been unwisely employed. The days of epsom salts are not far in retrospect. Surgeons have become the slaves of habit in the use of cathartics often to the detriment of the patient. Common sense dictates their use only when indicated and not as a routine procedure in the preparation for operation technic.

Shock: Cannon, Fraser and Cowell present an interesting and valuable study of the *Preventative Treatment of Wound Shock* (*Jour. Am. Med. Assn.*, LXX, 618, 1918). The authors refer to the association of acidosis with low blood pressure in shock. They believe that if operation is indicated on shocked patients a preliminary injection of alkali will act as a prophylactic of further acidosis. It should be noted that saline infusion actually increases acidosis. The fluid is required, but bicarbonate of soda fulfills the molecular requirements and also tends to prevent further acidosis. While 1.5 per cent. is isotonic, it is not enough for a neutralization—

hence hypertonic concentration should be used up to 4 per cent. Six cases cited show increase of blood pressure after injection of one pint of soda solution. The soda solution is given before the anaesthesia. (A notable factor in increasing acidosis.) Post-operative treatment of acidosis was thus forestalled.

Strychnine in Prevention and Cure of Surgical Shock (*Am. Jour. Surgery*, XXXII, p. 143, 1918). Fox has used strychnine in combating shock over two thousand times and has not observed a single untoward result. The dosage varies. He notes a marked tolerance, one-fifth of a grain having been injected in one dose. It is preferable however, to use a dosage of one-fifteenth to one-thirtieth of a grain, so as to be able to repeat. He claims that this drug antagonizes all shock phenomena, and is to shock what morphine is to pain.

Comment: According to excellent authorities this alkaloid is not only useless but positively harmful in surgical shock. Crile's experiments emphatically condemn the use of strychnine. The author belongs to a very small minority in advocating a drug which has long since fell into disrepute.

Baylis makes an interesting observation concerning **Intravenous Injection in Wound Shock** (*Brit. Med. Jour.*, I, 553, 1918). The author is not satisfied with prevalent theories of shock as rational guides to treatment. Among the many solutions given by enteroclysis, infusion, etc., he finds that those most in vogue are defective. He contends that it is necessary to use a calloid and that a simple solution of gum arabic will answer all purposes. When soda is indicated it is best given per rectum or per orem. This solution is a substitute for transfusion; it makes up for lost blood and raises the blood pressure.

Perforated Gastric and Duodenal Ulcer: (*Edinburgh Med. Jour.*, XX, 1918.) Wood makes the remarkable report of saving twenty-one out of twenty-nine cases—one moribund at operation not being counted. It is obvious that the mortality is lower than the average, being under 30 per cent. Of the twenty-one, seventeen reached the hospital within twelve hours. In twenty cases the ulcer was gastric, situated on the anterior surface of the stomach.

Comment: The interest in this report is the fact that despite the great dearth of family practitioners and operative surgeons, first-class work is still possible on the part of the substitutes. There have been many complaints of poor surgery in Great Britain by unqualified men during the war, but this criticism does not apply here. Dr. Wood was only a "temporary."

The interesting relation of **Ulcer and Cancer of the Stomach** is discussed by Wilensky and Thalheimer (*Annals of Surgery*, LXVII, 215, 1918.) Of forty-eight specimens studied but one showed the development of carcinoma on an ulcer base. The percentage of such cases can hardly be over two. Ulcers that appear to be microscopically benign are malignant in 18 per cent. In other words, these lesions are—save for the exceptions—either ulcers or cancers from first to last. There therefore appears to be no other safe course but to proceed against all chronic ulcers of the stomach as if they were cancers.

Comment: It would seem that the authors' views are extremely radical, and the conclusions not justified by the clinical data.

W. H. Mayo makes some interesting observations on the **Surgical Treatment of Cirrhosis of the Liver** (*Annals of Surgery*, LXVIII, p. 183, 1918). He found

in fifty-two splenectomies for splenic anaemia five advanced cases of portal cirrhosis were relieved of their ascites, in three there was relative recovery with ability to earn a living. In six other cases of enlarged spleen with cirrhosis, splenectomy caused great benefit in five.

Mayo operated by the Talma method twenty-eight times and had four operative deaths, while eight other patients succumbed at intervals. The other sixteen were more or less benefited, and of this number five have done well. A variety of technics were used in this operation. The best technic is perhaps to pull up the omentum through the peritoneum into the separated rectus.

Lynch makes a valuable contribution from his large experience in **Cancer of the Rectum** (*Annals of Surgery*, LXVII, 504, 1918). He has now operated on 335 of the 491 cases to seek treatment. The operative hospital mortality was 16 per cent. The number living after three years is 33; four years, 22; five years, 26; six years, 17. In other words, the technical number of three-year recoveries is 98, and of five-year recoveries 43. The operability per cent is 60. The author's material apparently includes that of the late Dr. Tuttle. The author states that improvements in technic have saved many patients from death by shock and peritonitis. He prefers the combined operation and was able to perform it in 111 out of 335 cases. The perineal route he chooses as the method for very fat or debilitated subjects—this he has performed 102 times. The abdominal route he has used only twenty times. The coccyx is removed and a preliminary colostomy always done.

Cripps reports a remarkable case of **Thirty-one Years Survival from Removal of Rectal Cancer** (*Brit. Med. Jour.*, I, 230, 1918). This case is reported to demonstrate that there may be indefinite survival after removal of cancer of the rectum. The patient was operated upon by Cripps in 1887. The patient was then 53 and up to the age of 84 was in excellent health. The only subsequent experience was the performance of an iniquinal colostomy in 1892, the precise reasons for which are not known (probably because of stricture). This was apparently never closed, but never caused any trouble. The cancer was adenocarcinoma. Cripps believes this case holds the record of survival.

Churchman has recently treated a case of **Melanosarcoma of the Rectum** (*Am. Jour. Med. Sci.*, CLV, 639, 1918). To this case he has added two others since the last general summary in 1913, the grand total now being sixty-seven. After biopsy of the tumor which was in the hemorrhoidal zone and removal of an iniquinal node had made the diagnosis, exploratory laparotomy revealed nodes in the liver which contraindicated operation. In 80 per cent. of these cases there are early metastases in the liver which makes exploratory laparotomy necessary. On account of the great rarity of the disease this point is of great value as nonmetastatic cases have made good recoveries.

Moschowitz reports an interesting case of that very rare phenomena **Pudendal Hernia** (*Am. Jour. Med. Sci.*, CLVI, 394, 1918). The author, who has treated one case, finds that the total now recorded is but eleven. The interesting fact is that not one has ever been cured, and but two have been operated with the exception of the present case. All have occurred in women. The author concluded that he had cured his case, but in a year the hernia had recurred. These cases cannot be cured because there can be neither high ligation of the sac nor closure of the internal hernial ring.

An interesting suggestion is made by W. Meyer concerning the cause of *Thromboangitis Obliterans* (*Jour. Am. Med. Assn.*, LXXI, 1268, 1918). After a careful analysis of the data of Buerger's disease the author is able to show that something is wrong with the carbohydrate metabolism of these patients. This may or may not be due to insufficiency of the endocrinal glands, one of which is the adrenals. The evidence at present is rather slender and no treatment has as yet been devised.

Comment: Many suggestions have been made to account for this interesting disease, but nothing tangible is yet offered. We have ventured to suggest that the solution will be found in a dyscrasia of the blood chemistry induced by a hypo or hyper endocrinal secretion.

Summary: To summarize the progress of surgery for the year 1918, we find the most valuable contributions emanating from the field of war; this is particularly marked in the treatment of wounds and the standardization of appliances for the treatment of fractures. The contributions to medical literature are meager, and those at hand record no substantial advance.

394 Clinton Avenue.

A REVIEW OF THE PROGRESS OF OBSTETRICS AND GYNECOLOGY FOR THE YEAR 1918.

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The medical advances in 1918 have been largely devoted to the development of war surgery, practically nothing of obstetric or gynecologic interest has been contributed from abroad; while, as usual, the American clinics have contributed much of clinical importance to the specialty of obstetrics and gynecology. Considerable study has been given to the toxemias of pregnancy and eclampsia, and while nothing new in the etiology has been determined, much valuable data has been accumulated and the preventive treatment emphasized by more extended prenatal care. For instance, Dr. A. C. Beck has shown the value of prenatal study in the prevention of ante-partum and inter-partum convulsions. In his records of 5,000 pregnant women studied in the prenatal clinic of the Long Island Hospital, where consistent and continuous ante-partum care is given to each parturient, there has been no case of convulsions develop. He has also been able to demonstrate, by accurate blood pressure and albumen charts, that there are two definite types of toxemia which occur in the pregnant woman during the later months. By the study of these charts the practitioner may accurately determine the prognosis of any given case of eclampsia in future pregnancies. Reviewing his work it would seem that in those toxemias of the hepatic type where there is little or no pre-eclamptic warning and where the systolic pressure drops promptly upon delivery and the albumen progressively diminishes after labor, while no immunity is produced, the woman is no more likely to have eclampsia at her subsequent labor than

other normal women and may safely become pregnant again. While those of the nephritic type, in which the high pressure and renal changes persists, should not be allowed to conceive.

While we all admit that eclampsia is preventable by proper ante-partum observation, both the profession and the laity must be educated to the economic importance of this routine, and until then there will always be these toxic explosions. In the treatment of the obstetric convulsions the pendulum has swung and the profession has accepted the more rational and conservative plan of dealing with this complication.

McPherson in a recent paper describes the treatment employed by him in a series of eclamptics admitted to his service at the New York Lying-In Hospital. It is essentially the treatment which has been advocated by Tweedy for a number of years at the Rotunda in Dublin; but until recently the American obstetrician was wont to adopt German radicalism rather than Irish conservatism, and while Stroganoff and Tweedy have been able to reduce both the maternal and fetal mortality by proper medical treatment, surgical obstetricians, particularly in this country, working on the principal that delivery caused a cessation of convulsions, have failed to show less than 25 per cent. mortality by any of the surgical methods. McPherson describes his plan of treatment as follows:

"Immediately on entrance to the hospital the patient's blood pressure is taken and a catheterized specimen of urine secured. She is put in an isolation room, which is darkened, and as much quiet as possible is obtained; she is then given by hypodermic injection one-half a grain of morphin sulphate, her stomach is washed out and two ounces of castor oil is poured down the tube at the end of the lavage. She is then given a colonic irrigation of five gallons of a 5 per cent. glucose solution. If the systolic blood pressure is over 175 mm. of mercury, phlebotomy is done and a sufficient quantity of blood is withdrawn to bring the pressure down to 150. Normal saline should not, as formerly recommended, be injected to replace the blood withdrawn. It is unwise to bleed the patient where the systolic pressure is less than 175 mm. One-quarter grain of morphin is now administered every hour until respirations drop to eight per minute, by which time convulsions have usually ceased. If the patient is at term she will have, in all probability, fallen into labor and spontaneous delivery in the large majority of cases will occur. General obstetric principles should govern interference and no effort should be made in any way to hurry the labor. The fact that the patient is an eclamptic need not necessarily be an indication for interference. While labor may be induced in conjunction with this treatment, bag induction favors more or less the reoccurrence of convulsions. If the cervix is fully dilated and the head is at or below the spines there is no objection to aiding the delivery by the application of low forceps. On the other hand, if the patient is not in labor and the head is not engaged, the indication is to treat the convulsions and disregard the delivery of the child. When the convulsions have ceased and the emunctories have been stimulated to their proper function, then and not until then should the question of delivery receive consideration. McPherson has reduced the maternal mortality to about eight per cent. and Tweedy claims his to be as low as five per cent. The reviewers' limited experience with the employment of this method seems to justify both of these claims. In one of our cases the patient had thirty-two convulsions and received five grains of morphin within a period of thirty hours, yet

the baby was born spontaneously and was not asphyxiated. This would seem to forever discredit the critics of morphin in labor because of its fatal effect upon the child. To our minds the great advantage of this treatment lies in the fact that its employment may be begun by the practitioner immediately he is called to see the case, and in that way save the woman from repeated convulsive seizures.

The symposium on the relation of the glands of internal secretion to obstetrics and gynecology presented before the American Gynecological Society gives us a better understanding of the present status of endocrine system. An analytic review of these important papers reveals the following facts, which may be of aid in the therapeutic management of our obstetric patients:

First—It has been shown that the maternal sex glands are not indispensable to the fetus after the fertilized ovum is firmly attached in the uterus, for repeatedly perfect children have been born of mothers from whom the ovaries have been removed after the first trimester of pregnancy.

Second—Some of the maternal glands must influence the development of the child, for we may note abnormalities in the fetus when the mother has suffered from diabetes, hyperthyroidism and tetany, and we must conclude also that some of the glands of internal secretion begin to exercise their function early in fetal life, for immediately after birth the sex organs and breasts of both male and female children may show activity instanced by uterine bleeding, colostrum and swelling of the breasts. This activity is the result of stimulation ascribed to substance derived from the maternal placenta. Sex glands produce a decided influence on development, for the removal of these glands from children is invariably followed by a lack of normal development.

Third—Pregnancy definitely influences the secretion of the hypophysis, the adrenels, the thyroid, the parathyroid and the pancreas.

Fourth—Variations in the function of the glands of internal secretion are shown by either a deficient or an excessive activity in gland function. When the activity is deficient, the skeleton develops poorly, the nervous system is defective or unstable or there is failure of function evident in lactation atrophy, sterility and disordered menstruation, or in remote results, as the production of goitre, myxedema, acromegaly. On the other hand, when the function is excessive there is unusual hemorrhage from the uterus at menstruation or anomalous uterine bleeding at other times. There is also some evidence that fibroid tumors have their origin in excessive function. From our experience we are inclined to believe that there is much in the clinical behavior of fibroids in these cases of faulty function to sustain this deduction.

Goetsch in an exhaustive paper discussed the relation of the pituitary gland to the female generative organ. Experiments have shown that partial removal of the anterior lobe of the pituitary gland in dogs is followed by secondary hypoplasia of the organs of generation in adults or by the persistence of sex infantilism in case the operation was done on puppies. By analogy we see the effect of deficient pituitary secretion in the maldevelopment of the female genital organs in the human. Experiments have shown that there is a definite relation between the secretion of the posterior lobe and the secretion of milk both during and after pregnancy. Whether this action of the posterior lobe principle is one specifically stimulating to the mammary cells or

whether it produces its effect by exciting contraction of the smooth muscle fibers around the ducts of the gland, thus causing expression of milk, remains an open question.

The extract of the anterior lobe of the pituitary body stimulates the organs of reproduction; this has been demonstrated by experiments on rats. These animals reproduced their kind much earlier and oftener when fed on this extract than under other conditions, and this effect persists throughout the adult life of the animal. When there is excessive secretion and action of the pituitary body in animals, autopsy shows atrophy of the reproductive organs. Thus in gigantism and acromegaly we have overgrowth of the skeleton with lack of development in the genital organs. During pregnancy the hypophysis increases, due to hyperplasia and hypertrophy of the anterior lobe, and there may be signs of temporary hyperfunction of the pituitary, such as changes in the thickness of the nose and face and enlargement of the hands and feet or even a transient glycosuria. Within a few months after childbirth retrogressive changes occur. After repeated pregnancies the glands may not undergo complete involution and there may develop a strumous degeneration followed by symptoms dependent upon deficiency in pituitary secretion. After removal of the sexual organs the pituitary body may become enlarged and show hyperfunction with resulting acromegaly. The extract from the posterior lobe of the pituitary body is used to cause the uterus to contract, and also to cause contraction of the smooth muscle fibers in the wall of the intestine. This extract is commonly used by hypodermic injection in the form of pituitrin or pituitary liquid. When given by hypodermic injection uterine contractions follow, the effect lasts from thirty minutes to two hours, with an average duration of about an hour, the strength and efficiency of the contraction is greatly increased. The blood pressure is increased 8-24 mg. of mercury and by the end of an hour the pressure returns to what it was before the injection. Labor can be induced by the use of pituitrin. It is a dangerous drug and should never be used when there is any disproportion between the child and the pelvis. It is safe only when the head is well engaged in the pelvis, the cervix is effaced and nearly or completely dilated and the bony outlet is known to be ample. Uterine rupture has followed its use. It is dangerous to the fetus through producing birth pressure and occasionally producing premature separation of the placenta from violent contraction. In the third stage atony its effect is transient and has not replaced preparations of ergot. In patients in whom the generative organs seem deficient in function improvement may be made by the administration of the extract from the whole gland derived from both lobes. Five to ten grains may be given three times a day with perfect safety.

Experimentally it has been proved that removal of the parathyroid in a pregnant animal will produce tetany, and this has happened in successive pregnancies. Young animals from whom the parathyroids have been removed show unusual excitability of the nerves, thus it would seem for the continuance of life and normal metabolism there must be in the body a minimum amount of parathyroid tissue; when this is insufficient the galvanic current shows increased irritability of the nervous system.

The pineal gland exerts its influence on prenatal development, as the gland usually undergoes involution at puberty most; manifestations of its disease or lack of function must occur before this period of life.

When the pineal gland is diseased we find early sex development, precocious mental development and general overgrowth of the body, so that a child of six or seven may seem to be fourteen or fifteen.

Curtis in an excellent article has shown the importance of the part played by stasis of vesical urine in the etiology of urinary tract infections. This paper should be read by every obstetric and gynecologic surgeon, for there are too many of us who are apt to look upon the catheter as a danger, rather than recognizing that the real danger is in the residual urine. Curtis's deductions may be summarized as follows: Both in disease and in experimental work, when virulent bacteria pass through the normal bladder they do not tend to infect the mucous membrane. Similarly when catheterization is performed for conditions other than for the relief of retained urine, subsequent infection rarely follows. On the contrary the cystitis which develops after catheterization to relieve a distended bladder occurs despite the utmost care. He concludes that retention of urine is the most important factor in the development of cystitis after operation, and further that cystitis seldom results from the careful catheterization of a healthy physiologically normal bladder, and that furthermore post-partum and post-operative accumulations of residual urine not only invite cystitis, but also greatly increase the dangers of kidney infection. The description of his technic of post-operative bladder treatment is very impressive and may be summarized as follows: Those patients who complain of distress are catheterized. *It is planned never to permit suffering from distension.* Since the discovery of the frequency of residual urine after operation, not only when micturition is difficult, but also when the power to void is apparently normal, every patient who cannot thoroughly empty the bladder is catheterized frequently enough to prevent, first, overdistension with resultant decreased emptying power; and, second, infection from urine left stagnant in the bladder. It is admittedly desirable to dispense with the catheter; but a catheter is passed without hesitation or fear when needed. In doubtful cases catheterization is considered more desirable than a possible stasis of urine. *Test for residual urine*—Any patient who has been catheterized many times or even occasionally over a period of several days, and resumes the power to void in an apparently normal manner, is observed most carefully for evidence of residual urine. Every such patient is catheterized once each day immediately after urination, and this test is repeated daily until not more than 20 cc. of urine is obtained. All catheterized patients receive hexamethylamine in amount sufficient to maintain a positive formaline test.

Perineotomy or median discision of the perineum for the preservation of the levators ani muscles in labor as suggested by Pomeroy is probably the greatest technical advance in operative obstetrics during the year. We are all agreed that the pelvic diaphragm sustains some degree of injury in all first labors, when the passenger is of the average size. We also know that every woman has some separation of the recti muscles as a result of her abdominal exertions in a prolonged second stage labor. Furthermore all women who have been subjected to a prolonged second stage with gradual stretching of the posterior segment of Hart, to a greater or lesser degree have some submucous separation of the levators even if there is no visible tear. The fascial structures both anteriorly and posteriorly sustain definite injury, and this is shown by the cystocele and rectocele which follows these deliveries even when no

outward laceration is to be observed. While pages have been written on how to manage the perineal stage, we know that heretofore nothing has been done toward saving the pelvic floor from injury, except to allow sufficient time for the dilatation of the vulvovaginal orifice and control of the head as it passes over the perineum, delivering it by its smallest successive circumferences. We are now convinced that this is not enough and that a large proportion of the relaxed pelvic floors operated upon are in women who have had "no lacerations" in the hands of their physician but who have had distinct submucous muscle and fascial injuries which give rise to the same symptoms as the frank visible perineal lacerations. The natural and usual tear of the perineal structure is asymmetrical in detail, leaving a traumatised lacerated wound for repair. Pomeroy proposes and practices a median discision of the fascial structures and perineal body which symmetrically relieves the tension in the median line and allows the levatores to recede toward the side and thus escape injury. This provides an ideal condition—an incised wound for symmetrical reconstruction by suture. He says the only point assailable in his claim for the superiority of the median incision is the risk of injury to the sphincter ani muscle. But this risk may be entirely overcome by thoroughly stretching and paralyzing the sphincter ani muscle before making the median incision. A relaxed sphincter ani cut in the midline is as accessible and manageable for repair by suture as the levatores ani muscle.

Long delayed second stage produces a definite mortality in the child and at no other time during the labor is it so important to watch the fetal heart. The head has escaped from the cervix and the uterus is closely moulded about the child and with each successive contraction there is a certain amount of interference with the feto-placental circulation. Furthermore, besides this danger to the child, we must admit that there is a distinct damage done to all the structures of the pelvic floor. Both of these conditions can be minimized by timely discision of the perineum. In other words we open the door and let the fetus out instead of waiting for the uterus "to push it out." Technique—In a primipara after "crowing" has occurred and the presenting part begins to appear at the vulvovaginal orifice and before any blueceding shows during the recession between pains discision is made through the stretched perineum in the median line. This is best done with a pair of straight Mayo scissors, cutting a quarter to a half inch at a time until the sphincter is exposed. If the sphincter has been thoroughly stretched beforehand we need have no fear of the incision extending through it, for as unless we are dealing with a funnel pelvis or effecting a breach extraction the sphincter will be pushed out of the way. The discision should include the vaginal mucosa, the perineal skin and the intermediate tissues in the median raphe sufficient in extent to relieve the tension of the vulvo ring, thereby allowing the levatores to retract uninjured.

Immediate repair of the injury is made as is illustrated in the accompanying drawings. By the adoption of the following detail, we have found that our results following medium perineotomy have been very satisfactory: 1st—Careful surgical asepsis. 2nd—Proper exposure of the parts incised and a full knowledge of the extent of the injury. 3rd—The placing of a vaginal pack against the cervix to keep the field of operation free from the blood coming down from above. 4th—Thorough hemostosis. 5th—Careful coaptation of like tissues by buried sutures without constriction. 6th—

Finally complete restoration of the incised tissues, particularly the levatores ani muscles.

Fortunately for the good of the public the profession is beginning to recognize that the curet has only two uses: 1st—to remove the retained products of conception before the eighth week, and 2nd—for diagnostic purposes in intermenstrual bleeding or in bleeding occurring at or near the menopause. When used for any other purpose, it immediately becomes a dangerous instrument.

Dublin estimates that 43% of the maternal deaths between the ages of 15-44 are due to perperal septicemia, and we might with safety venture the statement that 50% of these follow the use of the curet.

John A. Sampson has made one of the most important laboratory studies of the year in showing that it is possible to inject the uterus with melted gelatine containing in suspension Bismuth Sub-Carbonate or Barium Sulphate, and have it escape into the tubes if the latter are patent. This demonstrates, experimentally, that intra-uterine irrigations are attended with the danger of forcing some of the irrigating fluid through the fallopian tubes into the peritoneal cavity.

It further explains one way in which salpingitis and peritonitis may occur (puerperal or gonorrheal). If fluid containing bacteria within the uterine cavity, as infected menstrual blood, is in any way prevented from escaping through the cervix (as after amputation) it may be forced back into the tubes causing salpingitis and pelvic peritonitis.

He further demonstrates by the same method that under favorable conditions e. g. during menstruation or after curetting the uterine cavity foreign material may escape from the uterine cavity directly into the venous circulation. On the other hand, after repeated infections of uteri, with the endometrium intact, he failed to force the foreign fluid into the uterine veins.

He observed that uteri from young women with chronic pelvic inflammatory disease furnished the most favorable conditions, because the veins are larger and there seems to be a greater degree of relaxation which allows the escape of material from the uterine cavity through the uterine wall with greater freedom.

The uterus may be considered a muscular venous sponge. The veins for the most part spaces (sinuses) between the muscle bundles.

When the uterus is contracted the veins sinuses will be small, when relaxed they are dilated and filled with venous blood.

Contractions of the uterus maintain the circulation in the sinuses for the uterus must be considered as a "pelvic heart."

We must recognize two uterine cavities, the uterine cavity proper and the venous cavity. When the uterus is relaxed the venous cavity is filled with blood, when it contracts the blood is forced out of the uterus into the uterine veins. When the endometrium is injured and the uterus is relaxed the two cavities unite, the blood escaping from the venous cavity into the uterine cavity proper. In illustration of this, one will often note in curetting the uterus for an incomplete abortion, that the uterus dilates. This dilatation (relaxation) is associated with profuse (sometimes alarming) hemorrhage, on contracting the hemorrhage ceases. Curetting removes the endometrium and opens up the receiving sinuses. With contraction the blood in the cavity is forced through the cervix and the blood in the sinuses forced out into the uterine plexus.

In the light of this work we may, with more emphasis

than ever before, point to the curet as an instrument of danger and that intra-uterine irrigation, particularly following the pregnant state, is a procedure not without risk.

A. H. Curtis of Chicago in a combined bacteriological and histological study of the endometrium in health and disease, concludes that chronic endometritis, per se, with bacteria present in smears or culture, is practically to be ruled out as a clinical entity.

With the exception of pyometria and in recent exploration of the uterine cavity, the endometrium is almost invariably free of bacteria. When there is adjacent pelvic infection, the endometrium likewise shows the presence of bacteria. The gonococcus is the organism most commonly found in the uterus, probably because it is most often introduced into the vagina and cervix. Streptococci and Diplococci are less commonly found, but when present may live much longer in the tissues than the Gonococci and they can be isolated long after the infective process has apparently subsided.

The clinical lessons to be learned from these observations are—

1st—The endometrium does not ordinarily contain bacteria and therefore infection must be introduced from without. 2nd—When the endometrium does contain bacteria, as shown by the clinical history of the case, do not curet or otherwise traumatize the endometrium, for in so doing the infection is thereby spread to non-infected areas. This explains the rationale of not curetting an incomplete abortion with temperature or in the presence of acute pelvic infections.

This furthermore explains why the stem pessary so frequently produces a parametritis with consequent pelvic pain. 3rd—Intra-uterine medication is practically worthless as a curative agent, for we have seen that when the endometrium is chronically infected other pelvic structures are also infected and consequently well beyond the reach of any local applications. Hence the fallacy of iodizing the endometrium for the cure of leucorrhoea. 4th—In the cervix there are many glands that harbor infection and it is against this portion of the uterus that we can most efficiently direct our treatment. No review would be complete without a few words on the therapeutic value of radium. In their report of 210 fibroid tumors treated by radium, Kelly and Burnham have shown that radium is destined to replace to a large extent the surgical treatment of uncomplicated fibroid tumors. They state that by the use of radium they have accomplished 1st—The control of hemorrhage and the checking of menstruation. 2nd—The shrinkage of the tumors. 3rd—In many cases the complete disappearance of the tumor, and 4th, in some cases, even after two years of amenorrhoea the return of menstruation either normal or scanty. There are two distinct groups in this series (1) those over 40 years of age, in which the results were on the whole more satisfactory because of the total lack or tardy reestablishment of the menstrual function, and (2) those under 40 years of age in which the period of amenorrhoea under the same dosage was shorter duration. It is however perfectly possible to check hemorrhage and reduce the size of the tumor at any age, provided the irradiation is properly graduated. It is furthermore a fact that where menstruation is not stopped by the treatment or where the menstruation returns before the fibroid is gone, the tumor is likely to continue to grow. If menstruation stops but returns while the tumor is still present, and the tumor starts to increase in size, it is always possible to continue the radiation, stop menstruation and again check the growth. We have never

seen a tumor grow during a radium amenorrhoea. Of the 210 cases there were 28 in which the data was not sufficient to warrant including them in the final results—thus their report includes 182 cases, of these radium alone accomplished a complete relief of symptoms in 171 cases. In five of the remaining 11 there was some other complicating condition and in 2 operation was chosen. In 3 operation proved unnecessary and in 1 radium treatment had no effect. From this study it will be seen that they were able to treat 210 cases of uterine fibroids successfully or at least successfully enough, so that operation was not required in 81% of the cases. This we believe to be nothing short of marvelous, when we realize that these cases probably came from all parts of the country and might have been operated by good, bad or indifferent surgeons, whose morbidity to say nothing of their mortality, is often appalling following abdominal section for myomectomy or hysterectomy.

287 Clinton Avenue.

PROGRESS IN DISEASES OF THE NOSE, THROAT AND EAR FOR THE YEAR 1918.

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During the past year the war does not seem to have materially abbreviated the amount of general American literature on the nose, throat and ear. Americans have not had the time necessary to record very extensively their war experiences and to furnish them to the medical press. Hence, the papers on these experiences that have appeared are largely by foreign observers.

In view of the extraordinary conditions that have developed in Europe, the unusual injuries produced by the war, the expanded field of otology in connection with the new art of aviation and the prevailing intense interest in such matters at this time, the present report will deal mostly with these war subjects.

Examination of Aviators.

Some very interesting experiments have recently been made to determine the relative parts played by the labyrinth and vision in equilibration. Much importance has been attached to the Bárány equilibrium tests in the examination of aviators. It now transpires that vision plays a far greater role than had been suspected in the art of flying. Although it has been generally believed that a normal labyrinth was the prerequisite for equilibration, Percy Fridenberg asserts that in flying "the questions of hypersensitiveness to bright light, the sharpness of the sense of motion, the acuity of vision in lowered illumination, the appreciation of contrast in form, color and light, a rapid and accurate judgment of distance, direction and size and depending on all of these, space, make an interesting and practical problem." Corroborative of this conclusion are the experiences of Parsons and Segar, who found the poorest records under the Bárány tests proved to be the best aviators.

Surgeon H. Graeme Anderson, attached to the Royal Navy Service, and as an adviser to the special medical administrative committee recently constituted by Great Britain in an address before the Medical Society of London recently, presented the subject from every point of view based on his extensive experience. He corroborates the changing attitude toward the equilibration tests. "It has been assumed," he says, "that sound equilibration and muscle sense are essential to flying, so that the aviator would be conscious of his position in space, realize at once any deviations therefrom and cor-

rect these quickly. But in fog it has been found almost impossible to detect any deviation during flight. Time and again aviators coming out of the dark clouds or fog have found themselves flying one wing down, and it has been recorded that some have flown upside down without knowing it. Thus it is obvious that most of the impressions which control balance in flying come through the eyes." In fact, Surgeon Anderson, as an experiment, had himself blindfolded and his ears plugged with a telephonic connection to the pilot. The latter performed certain evolutions, and Surgeon Anderson attempted to describe the position in space at various times. He was able to do this during the climbing and flying with the right wing down and with the first spiral downward to the right. After that he was all at sea and thought the plane was climbing up continuously when in reality it was spiraling down to the left. He believes that this experiment goes far to prove that the aviator is for the most part dependent on impressions conveyed through the eyes for his sense of balance. He would not discard the equilibration, muscle sense and vestibular reactions, however, until further investigation has confirmed these points."

—(*Journal A. M. A.*, April 13, 1918.)

Visual Factors in Equilibration, Especially Aviation.

This subject has become not only a very interesting, but a tremendously important one since so large a number of student aviators have lost their lives on the training fields for warfare. Aviation as a new vocation has demonstrated the necessity of rapid and intense application of scientific principles to the conservation of life. Experience has shown that there must be a standardization of tests, not only for labyrinthine tests but for vision tests also. Heretofore rotational tests for labyrinthine reaction, dizziness, etc., have been given a prominent place. For this purpose a standard chair which can be stopped on the second, and rotated at a given speed and controlled by a stop-watch has been used.

Percy Fridenberg, while not minimizing the value of a normal labyrinth and of the rotation tests of function, says: "I believe it is timely to sound a warning against the neglect of other factors in balance and vertigo, and to call attention to the practical significance of clear vision and normal ocular muscle balance in aviators and military recruits."

Of such transcendent importance is this subject in the present war-time crisis, both as to the efficiency of our fighting forces and the safeguarding of the lives of our daring aviators, and so lucidly is the matter presented by Fridenberg, it is worth the while to quote his own words at length regarding his observations: "The labyrinthine tests refer, naturally, to rotational vertigo alone, and the fallacy to which I wish to call attention is the view that all vertigo is rotational, and so, labyrinthine. As a matter of fact, we must recognize, as did Nagel years ago, that there is a continuous series of vertigo forms ranging from the purely labyrinthine, due to rotation, to the purely visual without any motion or rotation component whatsoever, and that all of these forms are of practical importance as they equally interfere with balance and direction control and with full and undisturbed consciousness. Forms of dizziness that may make one faint or unable to control an aeroplane are commonly found in neurasthenia, anemia, chronic alcoholism, malaria, chronic nicotine poisoning and many other toxic states, as well as in chronic indigestion, lead intoxication and in convalescence from various diseases. Aside from these illnesses

apparently healthy subjects complain of dizziness due to various ocular anomalies, among which I may cite mixed astigmatism, accommodation spasm and paresis, ocular motor imbalance, retinal hyperesthesia, and asthenopic strain from whatever cause, functional, organic or, finally, exterior, as defective or improper illumination, position or work. Faulty or ill-fitting glasses, especially prisms or cylinders, are quite sufficient to cause dizziness of incapacitating degree.

"Labyrinthine disease is not common, even in hospitals devoted to the ear. Probably only a very small percentage of all mastoid operations involves the inner ear. Patients with labyrinthine involvement are generally critically ill. At least we may be safe in saying that they are not going about in search of positions in the flying corps. The same may be said of dead labyrinths. Their unfortunate possessors are not apt to try lofty flights, ideal or actual; and nowadays that the mastoid operation is performed early and often, the dead labyrinth, generally a result and residuum of neglected chronic labyrinthitis, is becoming progressively rarer. Reference has been made to unexplained falls from flying machines, and it is taken for granted that these accidents have happened to aviators with defective labyrinths, and that they might have been avoided by previous rotational tests.

"I think these assumptions quite gratuitous. In the first place, such defective labyrinths would have been detected in the course of instruction over the aviation field, or, at least, during the first trial flights. Again, the assumption ignores the possible effects of altitude and temperature on normal but susceptible organisms—not alone the labyrinth—and the natural possibility, amounting to a great probability that any one of a dozen factors, such as those enumerated above, and including, besides, cardiac syncope, embarrassed respiration or circulation, and panic fear, could easily cause an aviator to lose control of his machine and come crashing to earth. There must be a great variation in the reaction of normal subjects to the extreme changes of position and balance inseparable from aviation. Looking down from an extreme height, especially when insecurely placed, as on a church steeple or a precipice, and even when on secure footing, as a bridge, and viewing objects in rapid or irregular motion, such as storm-driven clouds, waves, masses of water tumbling over a fall or pouring through a flume, frequently cause dizziness to the point of complete lack of balance and loss of consciousness.

"Extreme or irregular stimulation of the organ of vision, dazzling or blinding, again, may cause similar symptoms, and we know well that there are certain physico-mental states, such as retinal asthenopia, in which even slightly increased stimuli produce markedly abnormal irritation. Irregular illumination and motion of objects alone may cause dizziness and confusions, as seen in the common field variety of "movie" headache and dizziness. A swinging mirror may cause a most marked seasickness, which, itself, the classical example of vertigo, is often relieved most effectually by excluding visual impressions, merely by closing the eyes. It can not be too often repeated with emphasis that vertigo is a disturbance or partial loss of consciousness due to incongruous reactions, whether of labyrinth, muscle-sense or vision.

"As normal labyrinths merely supply the possibility of vertigo and false sensations of direction and space (falling and past pointing), one might even venture the paradox that the safest aviators would be those with dead labyrinths. If we do not seriously go to this

length, we may at least call attention to the lack of accurate data as to nature of body balance under all conditions of rest and motion, and the rôle of the different senses, especially of vision, in its maintenance. Coming down to practical tests, just how much of a handicap is a dead labyrinth for accurate and delicate balancing? The absence of past pointing and of falling would indicate that it is an advantage rather than a drawback. Von Cyon showed, many years ago, that it was absurd to claim that the inner ear gives us accurate information regarding our relation to the vertical or as to our relative position in space. He gives numerous examples of illusions of position in space when we are not corrected by visual, musculoskeletal or splanchnic pressure sensations. The illusion of inclination of external objects viewed from a train when tipping on a curve, or from the inclined plane of a switchback gravity railway, are cases in point. The labyrinth does not teach the average subject when he is holding his head straight—that is, vertical—and the careful observer will note an inclination of from two or three to nearly ten degrees in normal persons. The moment they are called on to adjust this error by visual impressions, the head assumes the correct vertical position. In other words, the body position is brought into correspondence with a visually sensed standard, in this case a vertical line, or what is as good for practical correction, one at right angles to it—that is, horizontal. If the standard chosen is false, if the line is not exactly vertical, error will be manifested still. In other words, the labyrinth does not help a bit.

"Recently a number of aviators have lost their lives at various training camps by falls during trial flights. Undoubtedly these accidents, too, will be attributed to defective labyrinths, although it is to be assumed that by this time all applicants for the flying corps have been examined and put through rotational tests. As there is at least a question whether these tests are sufficient, it might be well to make practical observations of the conditions in flying and their reactions thereto, visual, as well as labyrinthine.

"In this connection interest attaches to a letter from an American aviator in France, describing his own sensations in flight when unable to see, and dependent only on his labyrinthine 'balance sense': 'When in the air at about 700 meters some low-hanging clouds blew down, enveloping me completely and likewise losing me completely. For a half hour I wandered around vainly trying to get my bearings.

When you get into very thick clouds it is impossible to tell whether you are in *ligne de vol*, that is, flying level, for there is no horizon visible to gauge on. Frequently an aviator will come out into clear space and find himself on the verge of a wing slip.'

"The American method of learning to fly always includes double control. The student rides with the instructor, who can take control away at any time. Therefore they go into the air at once. Under such conditions it should be easy for a trained observer to make notes—if only mental notes—of the pupil's reaction to unusual visual conditions."—(*Jour. A. M. A.*, April 6, 1918.)

Value of the Neuro-otologic Tests in the Army from a Diagnostic Standpoint.

E. R. Carpenter calls attention to the fact that, while the Bárány tests are used in examination of aviators, little has been written about their value in other departments of the army activities. The newness of the subject and its requirement of more extended knowl-

edge of neurology than the average otologist possesses may account for this. Owing to the anatomic relation of the vestibular end organ to the organ of hearing in the labyrinth, and the common nerve trunk for the two senses, as well as close central relation, the otologist falls heir to the newly acquired methods of examination. Here coöperation of the otologist and neurologist will almost invariably lead to correct diagnosis; at least they can determine whether the trouble is functional or organic. The soldier who complains of dizziness is entitled to as much consideration as one who complains of poor vision or deafness. Emphasis is placed on the mistakes of attributing vestibular dizziness to various other causes, or even classing these cases as malingerers, and the unfortunate uselessness of such men as soldiers. The peripheral nerve ending may be involved by any disease common to the middle and internal ear. The nerve trunk is subject to various disturbances, and, when we consider the extensive ramification of the vestibular fibers in the spinal cord, the medulla, the cerebellum and the cerebral cortex, as well as the vestibular relation to all the cranial nuclei, we can appreciate the opportunities for intracranial involvement. Someone has said, "The vestibular apparatus is the brain sentinel." Through the various connections with the cranial nerve nuclei, reflex irritation may occur and produce dizziness, as is frequently encountered in refraction work, nasal examinations, acute indigestion, etc.; while toxemia from any source, as chronic indigestion, chemical absorption, infections and constitutional diseases, may account for other cases. Here the prognosis depends on eliminating the cause of irritation. Carpenter detailed a case illustrating the importance of the Bárány tests and of a close coöperation of the otologist and neurologist in making them.—*Jour. A. M. A.*, Sept. 14, 1918.)

Much valuable information is contained in the *Laryngoscope* for April, 1918, from which the following excerpts are culled:

Morbid Anatomy of War Injuries of the Ear.

J. S. Fraser and John Fraser cite a case of shrapnel injury of the left ear. When the patient was admitted to the Royal Infirmary, Edinburgh, about a month after the injury, symptoms of cerebellar abscess were present. Operation revealed mastoiditis and small metallic particles in the mastoid antrum. In spite of the evacuation of the cerebellar abscess the patient died. Autopsy showed early meningitis and sinus thrombosis. Microscopic examination of the ear demonstrated a thickened, infiltrated and perforated drumhead with fracture of the malleus. The lower part of the handle was separated from the drumhead and drawn inward by the tensor tympani. The tympanic cavity and antrum were full of pus. There was fracture of the footplate of the stapes. The cochlea showed hemorrhage in the scala tympani of the basal and middle coil and in the opening of the perilymphatic duct, but the nerve apparatus of the cochlea appeared almost healthy. The neuro-epithelium of the sacculle and utricle and the cristae of the canals was desquamating. The internal meatus showed meningitis.

Traumatic Dislocation of the Incus.

W. M. Mollison described a case in which the patient, aged 38 years, was exposed to a violent explosion on his left-hand side, about 12 yards away. He was unconscious for 24 hours, after which he found that he was deaf in his left ear. Soon after, the ear began to discharge and, because it continued, together with some pain and slight tinnitus and the otorrhœa became

quite foul, he was subjected to a radical mastoid operation. While curetting was being done in the antrum and toward the aditus to remove small spicules of bone, there being no pus in the antrum, the incus was found lying quite loose and bare.

Vertigo.

L. Fischer comes to the following conclusions: 1. There can be no vertigo unless there is disturbance of the vestibular apparatus; when disease in remote organs is accompanied by vertigo it is because such a pathological state in some manner affects the vestibular apparatus. 2. Vertigo may be due to simple irritation of the vestibular tracts. 3. Vertigo may be produced by a lesion of the internal ear itself, or (4) by a lesion situated within the brain along some pathway in association with the ear.

Stenosis of the Ears by Shock.

F. J. Quinlan had a patient who met with an accident while trying to take a picture at night, the spark used in connection with the camera having blown up so that he was thrown to the ground. The next day Dr. Quinlan saw the patient and found that both his eyes were closed and only by some force could argyrol be put between the lids; the external auditory canals of both ears were absolutely stenosed, and it was only by using force that the drums could be seen, and then only partially. Both drums were torn; the boy could not hear. All the symptoms cleared up in a few days, and subsequently repair of the drums began to take place so that the boy could hear a whisper at four feet.

Wounds of the External Auditory Canal.

J. Rozier writes of his experience in the oto-rhinolaryngological department of the French army, to which he was attached. Of 13,000 patients that were treated since the beginning of the war 9,000 had some wound of the ears, including ear troubles due to shell explosions besides actual trauma caused by projectiles. He deals especially with traumatic stenosis and atresia of the canal, and the operative treatment, he states, depends upon whether the stenosis or atresia is simple and without any neighboring lesion, or whether it is complicated by some middle-ear suppuration. If, after as wide excision as possible of the cicatricial tissue causing the stenosis or atresia, there is a tendency to a recurrence of the condition, several further procedures may be necessary: enlargement of the auditory canal by abrading its posterior wall as far as the tympanic membrane; or autoplasty of the membranous canal according to Moure's method. In the majority of cases of stenosis the author has obtained perfect recovery.

War Injuries of the Ear.

C. E. Jones-Phillipson (*Jl. Lar., Rhinology and Otology*, March, 1918) spent nine months in an army hospital, saw 1,172 cases and examined 100 cases of war injuries of the ear. Thirty-one were lacerations of the drumhead. He saw these from 24 to 36 hours after they left the trenches, some of them on the same day that the injuries occurred. Referring to 31 of the cases, lacerations were in the anterior-inferior quadrant in 20; in the posterior-inferior quadrant in 6; in inferior quadrant in 1; in posterior quadrant across the two in 1; in the anterior-superior quadrant in 1. There was one laceration in the membrana flaccida. One had a rupture in the membrana tympani in the anterior-superior quadrant, high up. There were four with blood clots in the middle ear, and one declared that he could taste the blood in his mouth, although examination of the patient's pharynx failed to reveal the pres-

ence of blood. Some of these men became unconscious and remained so for one or two hours. A dazed condition succeeded this unconsciousness, and they could not walk unassisted. They even lost the power of speech, and two or three could not see. The major symptoms improved, but vertigo lasted a long time. There was horizontal or rotatory nystagmus on turning the eyes even when they were not turned to the limit, double when the explosion was on the parapet in front of the man, or right or left spontaneous nystagmus according to the side affected. The observer was seldom able to watch a case longer than fourteen days because the patient was suddenly and quickly sent to a base hospital or to England. In a hurriedly recruited army large numbers of men start military life as practically deaf men. Many injuries to the auricle occur, but generally they heal quickly, and often there is no involvement of the middle or internal ear. Seventy out of 100 injured showed previous diseases of the nose, throat and ear. In the majority of cases, acute otitis was followed by suppuration, and healing of the lacerated drumheads was slow. These results were due to the dirty conditions that were inevitably present. Deafness was very marked soon after explosions, especially on the side exposed to the explosive force. Noises were noticed after the first degree of deafness passed off, generally, and persisted after the deafness subsided. Some deafness and the tinnitus persisted from seven to ten or fourteen days or longer.

Major A. F. Hurst, in discussing the above paper, said: "The deafness is hysterical and due to auto-suggestion and not due to any gross lesion in the labyrinth."

Lieut.-Col. Goldsmith states that the amount of acuity of hearing necessary for a recruit to enter the British army has not been laid down. In the Canadian army a man who hears ordinary conversation at a distance of 15 feet away in each ear, and who has no organic disease of the ear, can be accounted fit for class A.

Mr. Somervith Hastings, after seeing many cases of injury at two hospitals, said he had been struck with the amount of injury the normal ear will stand without any permanent affection of the hearing power. Cases in which suppuration had occurred previously to the injury became easily subject to suppuration after a concussion.

W. Sohler-Bryant (*Jl. Lar. Rhin. and Otolaryngology*, April, 1918) declares the Italian army service in diseases of the nose, throat and ear to be superior to that of the other allies. Their work is more concentrated and systematized, and special inspectors inspect the various hospitals and see that cases are differentiated and placed under the care of the highest grade specialists as their needs require. "The oto-rhino-laryngological specialty is normally important in this war because of the great number of defective ears, many of which existed before the injuries, or are aggravated by the injuries." In fact, the otological specialty may be said to be of more importance than all the other specialties put together, because of the great medico-legal importance of the ear. It is no less important in Italy than in France. There are many more wounds of the eye than the ear. Most of the wounds in our field of work are of the ear—80 per cent.; 90 per cent. of these are purulent ears. One specialist calls chronic suppuration of the middle ear "the plague of the war." The hearing requirement in the Italian army for service in the first line is the whispered voice of not less than one meter.

The total number of otological cases is about equal to the number of ophthalmological cases.

Tonsillectomy vs. Tonsillotomy.

Seth Scott Bishop (*Medical Review of Reviews*, April, 1918) writes: "The voluminous literature on tonsillar operations during the last few years attests the importance which physicians attach to the subject and their increasing interest in it. But there are two most surprising features which stand out prominently in the literature: first, the numerous disastrous results following tonsillectomy, or complete enucleation of the gland; and second, the persistency with which operators unnecessarily adhere to that method. . . . An undoubted reaction has set in against this procedure, as is illustrated by the following quotation from the *Medical Review of Reviews* for January, 1918: 'I am convinced that more than 90 per cent. of the tonsillectomies performed today will be abandoned for a more scientific, practical and safe method.' Leaving out of consideration for the moment those cases in which broncho-pulmonary infection does not occur, the results of tonsillectomy are not comparable to those of tonsillotomy. That is, the throat is not left in a condition as nearly normal as it is after tonsillotomy. . . . The deplorable results of tonsillectomy do not characterize tonsillotomy, which leaves a flat cushion of tonsillar tissue covering the aponeurosis to keep the faucial pillars apart in phonation. More than that, it permits of a continuation of a modified function of the gland. . . . I have been privileged to examine patients upon whom I had operated about twenty years previously, and their histories presented no results that were not satisfactory to both patient and doctor."

The Method of Analysis of the Bárány Tests in Pathological Cases.

Lewis Fisher (*Laryngoscope*, October, 1918) writes: "To be able to interpret the various findings obtained by an examination of the vestibular apparatus it is essential that the data be properly recorded. It is helpful to use a special chart, such as is here shown, one in which all the salient features of the examination may be reviewed at a glance. The first question that presents itself in any given case is whether we are dealing with a functional or organic condition. If the chart shows all the responses to ear-stimulation perfectly normal, the case should be considered as having an organic lesion. Such a deviation from the normal need not include all the responses. A definite impairment of even one response shows that we are dealing with an organic lesion." The chart and eleven plates illustrate the method.

31 North State Street.

Ulcerating Granuloma.

A good account of 20 cases of this disease in the female is given by Curjel. This disease was ascribed by Cleland and Wise to a spirochæte. A. da Matta believes that it is due to a bacterial organism which he names *Calymmatobacterium granulomatis*, the presence of which may be made use of for diagnosis. Smears are made from a fragment of tissue taken from beneath the superficial part of the ulceration, and preferably from an area recently invaded. The smears are fixed with methyl alcohol and stained with Giemsa.

Antimony is now stated to be a cure for this condition. A 1 per cent. solution of tartar emetic is given intravenously. Three to five injections are given, a dose every day or every two or three days. The first dose is from 2 to 4 centigrams, and this is increased up to 16 centigrams. The tartar emetic solution should be freshly prepared and sterilized in the cold by passing the solution through a sterile Chamberland or Berkefeld filter candle.—(*Practitioner*.)

OPHTHALMOLOGY DURING 1918.

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The world war has affected every domain of living and likewise ophthalmic literature has not escaped its influence. Ophthalmologists have been quick to offer their services and already a few have died in the service of their country, men whose contributions to ophthalmology have always been welcomed and who were known as original thinkers and experimenters. As was stated by the writer in the review of last year the ophthalmic medical journals have all been combined under the name of the new periodical *American Journal of Ophthalmology*, with Dr. Edward Jackson as Editor in Chief, assisted by a splendid corps of ophthalmic aides.

One very excellent and prominent ophthalmic journal still continues to publish the name of a German ophthalmologist as one of its editors. This certainly seems ill-advised under the existing crisis when the Hun is so detestible in the eyes of the whole world. At the last meeting of the American Laryngological, Rhinological and Otological Society at Atlantic City by unanimous vote it was decided to drop from its membership the Honorary Fellows who were living in Germany and Austria. Does any American ophthalmologist believe for one instant that a German periodical would continue to publish the name of an American upon its front page as one of its associate editors? It seems to the writer that patriotism should be just as acute among ophthalmologists as among any other class of American citizens.

During the last year the question of hygiene of the eye has received considerable attention along with the general subject of hygiene, which has become of so much importance in the medical management of large bodies of troops.

It is indeed true that certain types of eye troubles, whether inflammatory or anomalous in their development, are much less frequent today than they were several years ago. This can only be attributed to the wide-spread teaching of hygienic and prophylactic principles to the public in general.

One of the most comprehensive articles on the subject of examination and treatment for eye diseases among school children appeared in the *New York Medical Journal* of Nov. 24th, 1917, from the pen of Dr. A. Rovinsky. He has very thoroughly considered this whole subject with due reference to the various men who have worked along this line and whose views must always carry much weight. We give here Rovinsky's conclusions, although it is questionable whether these are practicable in smaller cities:

1. The role of the eye in the human economy is so great and its importance in the earning capacity of the individual is so essential that no means should be spared by the state to conserve vision from the earliest childhood.

2. As irreparable deterioration of vision is apt to result from ocular affections that may not appear serious even to the medical man not specially trained in ophthalmology, such as maculæ or leukomata centrally located consequent upon the several varieties of keratitis, corneal ulcers, etc., the early recognition of such conditions in the school children is most imperative and it devolves on the state to render proper and timely aid in detecting and treating such affections whenever the parents are unable to obtain such aid themselves.

3. The establishment of school eye clinics should be

considered as a part of the system of medical school inspections, their number to conform to the needs of the surrounding neighborhood.

4. As regards contagious eye diseases, it should be made obligatory upon the parents of public, parochial, and private school children to report to these school clinics for diagnosis and treatment until the condition is cured and the child readmitted to school, unless they present sufficient evidence that their children are being treated by private physicians.

5. Instead of resorting to private charitable agencies to procure eye-glasses for children who need them but are unable to obtain them, it should be the business of the clinic to supply the children with glasses either at nominal cost by arrangement with competent opticians, or free of charge.

A very interesting and important subject has been discussed by B. N. Harman in the *British Medical Journal* of July 17, 1917. It deals with the "Effects of Cinematograph Displays on the Eyes of Children." According to this writer the unpleasant effects associated with the cinematograph exhibition, so far as they effect the eyes, are due to the following condition: (1) Glare, (2) flicker, (3) rapidity of motion, (4) concentration of attention, (5) duration of exhibition. He then discusses each one of these points and shows how they can be detrimental to the eyes. Harman closes his article with the following recommendations: (1) The reasonable illumination of all parts of the hall not directly beside the screen. (2) The improvement of the movement of the film so as to reduce flicker, and the withdrawal of films immediately they are damaged. (3) An improvement in taking the picture so as to bring the rate of motion of the objects depicted more nearly to the natural. (4) The increase in the number of intervals in the show, and the interposition of exhibitions other than that of the optical lantern. (5) The limitation of shows for children to one hour, and the prohibition of "repeats." (6) The reservation of the children's seats to the "optimum" position in the hall. With such provisions the indulgence in a show once a week should do no harm to the eyes of a normal child.

In discussing Vernal Conjunctivitis, F. Allport has reported such a case (palpebral form) where a most excellent final result was obtained by the use of the X-Ray. This is by no means the first case reported where this method of treatment was used. The use of radium has also been recommended by various writers in the management of such cases. This procedure is quite applicable to the palpebral form, but in those cases of the bulbar variety, such treatment might prove detrimental to the vision. Several years ago the present writer discussed the subject of vernal conjunctivitis in the South, especially among the negro race, which seems especially liable to this ocular disease. However, it is only the bulbar form which is seen in this locality and practically never the palpebral form. The bulbar form is so severe that frequently only a small portion of the central cornea is left which is not invaded. A remedy for this variety of vernal conjunctivitis is certainly much to be desired, for in the writer's hand no remedy so far has been found to be curative.

Since the introduction of vaccination for the prevention of typhoid fever, an article by de Lapersonne in the *Arch. d'Ophtal.*, April, 1917, dealing with ocular symptoms and lesions following such inoculations, comes at a very opportune time, and his summary, which we here publish, will no doubt be read with interest.

He summarizes his opinions as follows:

1. Infections resulting from faulty technique, often serious in character, are not due to the direct action of the vaccine.

2. Antityphoid vaccine has given rise, directly, to a very small number of ocular lesions, notably to corneal herpes (ascribed to toxic neuritis of the trigeminal), and to iridocyclitis in patients with constitutional taint. Glaucoma, secondary to iridocyclitis, may develop during the reaction which follows vaccination.

3. No instances of definite lesions of the optic nerves or tracts or of oculomotor paralysis have been recorded.

4. Primary acute glaucoma may develop during the vaccination reaction.

5. No lesion should be ascribed to inoculation which does not arise during or very shortly after the series of injections, and while the thermometer affords evidence of a severe reaction.

6. An ophthalmoscopic, in addition to a medical examination, should be made before inoculation. It is inadvisable to submit to inoculation syphilitic, tuberculous or arthritic subjects over 40 years of age who have had lesions of the uveal tract.

A very excellent article on the subject of Ocular Headaches has appeared in the *Northwest Medicine* of December, 1917, by Dr. D. H. Bell. The main points of this article have been well discussed and much food for thought can be obtained from this well-written article. The conclusions given by the writer are very succinct and could be largely subscribed to by every oculist. These are:

A case of suspected ocular headache should be carefully refracted under a cycloplegic.

All children with crossed-eyes, either with or without headaches, should be refracted between the ages of 3 and 6 years.

All children entering school should be examined by a competent nurse for signs of eye-strain and, if found so affected, should be required to have a careful eye examination and proper treatment.

Excellent vision in the presence of other evidences of eye-strain is of no diagnostic value.

Many serious eye diseases are not accompanied by headache, but show only by failing vision.

One-third of cases of migraine can be relieved by glasses.

Ninety per cent. of eye headaches can be cured by proper refraction and treatment to the eyes.

The cure of an eye headache often takes time because of poor nutrition of the eye and disturbed relations of convergence and accommodation and also the training of new habits.

All adults should wear glasses as soon as the near point recedes beyond fourteen inches or the lines begin to blur, in order that headaches may be avoided as well as serious injury to the eyes.

Military Surgery of the Eyes.

The writer wishes to say that he is much indebted for this summary to what is found in the *Medical Year Book of Eye, Ear, Nose, and Throat Diseases* for 1918.

Giuseppe, quotes in the *Ophthalmic Record*, December, 1917, has discussed the nature of war injuries to the eye as observed among the Italian armies. He finds that 16 per cent. of injuries of the eyes are from machine guns or shrapnel, 50 per cent. from flying scraps of stone, 5 per cent. from trachoma, and 25 per cent. from asphyxiating gases. The toxic gases which induce much lachrymation are far less dangerous to the eyes

than the usual asphyxiation gases. When the latter act on the eye long enough they deprive the cornea of sensibility, and if the injury is severe small foci of necrosis develop, there is severe pain in the brow, back of the neck and temples, and the eye slowly dies, the eyeball becoming completely atrophied.

Terrien in *Arch. d'Ophthalm.*, Vol. V, No. 11, has discussed a very important subject, and that is the "Conservative Treatment of War Injuries of the Eye." While he advocates removal or attempted removal of the foreign body in the majority of cases, he is of opinion that in a certain proportion, especially when a moderate degree of sight is retained, it is inadvisable to operate. Such cases are those in which the eye has exhibited no signs of irritation, or, in other words, shows a marked tolerance of the penetrating particle. He publishes the notes of five soldiers, in each of whom the presence of a foreign body within the globe was proved by X-ray or ophthalmoscopic examination. In all these cases the wounded eye was free from pain, redness, or any other sign of reaction set up by the foreign body. In all, the eye retained some sight, and in one, vision was practically normal. In one man the fellow eye was badly injured and nearly blind.

It is noteworthy that none of Terrin's patients remained under his observation for more than three months; hence the possibility of the onset of trouble after a long interval cannot be wholly excluded.

The variety of sympathetic inflammation among a large number of injuries seen during the present war has been noted by many observers, and several have called attention to this subject in the various ophthalmic articles which have been published.

One of the best discussions of this subject is from the pen of Weekers in the *Arch. med belges*, March, 1917. The points brought forward in this article are so important that we take the liberty of quoting this abstract:

What are the risks (to the second eye) of sympathetic disease? Statistics in regard to this point show considerable divergence. For example, in wounds of the eye with penetration of foreign bodies, Ohleman found sympathetic ophthalmitis in 0.7 per cent.; Knies had 3 per cent. in wounds of the eye; and Hobby, 11.6 per cent. Similar differences exist as regards the frequency of the complication after surgical traumatism. After removal of cataract, Eversbursch and Pennerl had 1.3 per cent. of sympathetic ophthalmitis; Agnew, 2 per cent. or 3 per cent.; and Steffan no less than 21 per cent. The difference between the figures Weekers is inclined to trace to confusion between sympathetic irritation, on the one hand, and sympathetic inflammation on the other. If typical cases of sympathetic inflammation alone were included, Weekers believes that the apparent frequency would be considerably reduced.

For purposes of prevention should we hasten to remove a wounded eye, already lost from a functional point of view? There is nothing pressing about the matter, and we may in every case wait at least for a few days. Whenever the wound is such as to allow of the hope that the eyeball will keep its shape, Weekers believes that conservative means should be adopted. The condition of the wounded eye must be our guide. Should it remain painful and irritable for a month or six weeks after the injury, it must be sacrificed. We should not wait so long, indeed, if the globe appears to be on the way to atrophy or if exudative iridocyclitis develops in the injured eye.

Which should be preferred, enucleation or exenteration? During the last eighteen months Weekers has

not performed a single enucleation. He has resected the cornea and a narrow band of the neighboring sclerotic, emptied the content of the eyeball, and curetted the sclera with care. He claims that exenteration gives as much security against sympathetic disease as does enucleation, while the esthetic results are much superior.

Weekers does not share Meller's view, namely, that sympathetic ophthalmitis is due to the action of a microbe, which may (under certain circumstances still unknown) develop in the blood. Given a wound of the eye, this agent proliferates in the wounded tissues, its virulence augments, and it passes anew into the blood, whereby it reaches the other eye, where it sets up sympathetic inflammation. Dimmer inquires whether the extreme rarity of sympathetic ophthalmitis in war wounds is not a question of terrain. Can it not be explained by the good general health of soldiers, who are a selected body of men?

The present-day rarity of sympathetic ophthalmitis is to be explained, in Weeker's view, by the "vulgarization," so to speak, of asepsis and antisepsis, which tells all along the line—in the first aid, during treatment, and in operations on the eye.

The subject of movable stumps after enucleation for war injuries has been very thoroughly discussed by Terrien in *Arch. d'Ophtal.*, June, 1917, and after considerable experience with this class of cases he has arrived at the following conclusions:

1. The stumps which give the best results are "natural stumps" (atrophic, painless globes, posterior segments of globes, scleral envelopes left after exenteration). Attempts should be made to obtain such stumps by conservation treatment, or by the various procedures for removal of the anterior segment of the eyeball, or by exenteration of the globe. By none of these methods can the risk of sympathetic ophthalmitis be wholly excluded, and they cannot therefore be adopted systematically.

2. Enucleation, when necessary, should always be performed with care, and should be completed by the graft of a portion of costal cartilage, about 1.5 cm. in length, taken from the patient, into the capsule of Tenon. The tendon of each rectus muscle is sutured to the cartilage. The motility thus obtained is perfect, the sinking of the glass eye is obviated and the prosthetic result is excellent. It is equal to that obtained by "natural stumps" and less dangerous, all risk of sympathetic ophthalmitis being avoided. This appears to be the method of selection.

3. In default of a graft, and after simple enucleation, prosthesis can be greatly improved by the employment of artificial stumps consisting of a hard ebonite shell in an envelope of soft india-rubber, which moulds itself at the bottom of the conjunctival sac, or by the use temporarily of moulds of soft wax introduced behind the artificial eye. This is an excellent method of remedying the unsightly sinking of the glass eye, and at the same time giving it a certain degree of mobility. It causes no discomfort to the individual, and it is only surprising that such means of remedying a deformity were not introduced long ago.

4. If the culs-de-sacs are contracted, or irregular, and will not hold an artificial eye, progressive dilatation by globes of increasing size is a simple and effective procedure. It is generally preferable to, and more successful than, any operative measures designed to restore a contracted conjunctival cavity.

Grand Opera House.

A REVIEW OF DERMATOLOGY AND SYPHILIS DURING THE YEAR 1918.

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A review of the progress in dermatology and syphilis during 1918 shows a deficiency in scientific investigation. There is little to report that is new. However, numerous valuable contributions appeared in the literature. Rare and interesting cases were reported; the relationship of anaphylaxis, focal infection, plant poisons, tuberculosis and the vegetative nervous system to the causation of cutaneous diseases was discussed and new suggestions in the treatment of dermatoses were made. Routine work was done in syphilis; and there was shown a most gratifying interest in the attempt to eradicate it.

Miscellaneous.

MacKee¹ and Paroungian described two cases of a condition which they have named folliculitis ulerythematosus reticulata. It is characterized clinically by a symmetrical erythema of the cheeks, reticulated atrophy, comedones and horny plugs which may disappear in adult life. There is an absence of papules, pustules, scabiness or seborrhœa. It appears in childhood and shows a slow evolution. The histopathology is essentially that of a folliculitis.

Pollitzer² reported the unusual occurrence of bone-formation in a case of scleroderma. As the connective tissue of an old scleroderma has much in common with old scar tissue the osteosis may be regarded as analogous to the bone formation in old scars. The pathologic process begins with a calcification of the altered connective tissue fibers which have become condensed and fused. After the deposit of lime salts many of these areas remain unchanged, provoking no reaction in the cutis; or as a result of injury to the epidermis reach the surface. Some of these calcified areas undergo ossification.

Matsumoto³ reported a rare condition of the palms, which consists of pin-point to poppy-seed sized, yellowish or brownish horny, punctiform efflorescences.

Smith⁴ showed that the changes in the subcutaneous fat from a case of sclerema neonatorum were similar to fat necrosis and not due to an absence of oleic acid.

Mackay and Boyd⁵ reported a case of mycosis fungoides in which the tumors from the internal organs disclosed a pathology corresponding to that in the skin.

Reede⁶ in an excellent paper emphasized the intimate relationship between the ductless glands and the vegetative nervous system; and showed that disturbances arising in either may produce metabolic irregularities, resulting in changes in the skin.

Mondolfo⁷ reported a case of diphtheria in which the primary site of infection was in the skin.

That safety matches may produce a dermatitis was demonstrated by Rasch⁸ in a report of several cases.

Stiell⁹ claimed that impetigo contagiosa may produce a nephritis.

Wise and Levin¹⁰ reported the first case of cutis verticis gyrata to be recorded on this continent. This anomaly consists of gyrus-like elevations separated by furrows and suggests the appearance of the scalp of a

bulldog. It was evident in this case that an inflammatory process was entirely absent.

Acanthosis nigricans is a rare cutaneous disease and its true etiology is not definitely known. The most tenable theory with regard to the adult cases is the mechanico-nervous theory of Darier: that the cutaneous dystrophies are secondary to derangements of the abdominal sympathetic, induced by neoplasms of the abdominal viscera and by their metastatic growth. Wise¹¹ described a case in an unmarried woman, aged 25 years, which appeared subsequent to decapsulation of the kidneys. The author assumes that the function of the abdominal or adrenal sympathetic, or the adrenal gland itself was affected by the disturbed circulation resulting from the operative procedure. On the other hand, adhesions may have interfered with the functions of the tissues, or, exudates and proliferated fibrous tissues exerted pressure on intra-abdominal structures which in some manner played a role in the causation of acanthosis nigricans.

In another paper Wise¹² reported the unusual occurrence of urticaria pigmentosa in an adult, aged 51 years, in whom the disease appeared nine years previously.

Foerster¹³ called attention to the occurrence of a painful nodular growth of the ear which differs in both clinical and histologic features from keratotic growths, and bears only a slight resemblance to epithelioma. During the past year the reviewer observed this condition on the auricle of a male adult and a cure followed its excision.

Tuberculosis.

Several papers have been written discussing the relationship of tuberculosis to the so-called tuberculids. Wise¹⁴ made a survey of the literature to determine the relationship of tuberculosis to lupus erythematosus and concluded that very little progress has been made in the determination of the pathogenesis of this dermatosis.

Weiss and Singer¹⁵ as a result of their careful study of twelve cases of lupus erythematosus discoides concluded that there is no positive evidence of an etiological relationship between this disease and tuberculosis.

In another article Wise¹⁶ discussed the exanthemic forms of tuberculids and stated that all evidence indicates that the papulo-necrotic tuberculids, miliary tuberculosis of the skin and lichen scrofulosorum are produced by the infection of the skin by the tubercle bacillus.

Cancer.

Harris¹⁷ in a long review of the subject, forms the opinion that further study will show that various etiological factors enter into the causation of cancer.

MacKee¹⁸ contributed an excellent article on the treatment of cancer of the skin. Early complete destruction of the so-called precancerous conditions is advised. The three recognized legitimate means for combating skin cancer are: 1. excision, 2. cauterization, 3. roentgen ray or radium. MacKee favors the roentgen ray or radium for the untreated small, superficial basal cell epithelioma; Sherwell's method, fulguration or the actual cautery with intensive roentgenization or radium therapy for the deep-seated, indurated or markedly nodular basal cell epithelioma and excision or Sherwell's method for basal cell epithelioma which refuse to retrogress under the influence of radium or the roentgen ray. He advises for small, non-indurated squamous cell epithelioma excision, otherwise roentgen ray or radium. For cutaneous sarcomas excision followed by roentgen ray or radium is the method of choice and roentgen ray or radium in inoperable cases.

Morrow¹⁹ reported two cases of the Bowen type of

epithelioma and stated that these are carcinomatous from the start.

There is a tendency among dermatologists to justly condemn the term pre-cancerous. This term is a misnomer and unscientific and should be omitted from the nomenclature of cutaneous diseases.

Biological Studies.

Lain²⁰ is of the opinion that the tomato plant through its hairs or a water soluble glucosid can infect the skin and produce a form of dermatitis venenata which he has named dermatitis lycopersicum esculentum. Several cases were described with a positive etiologic history. There is a close botanical and clinical relationship between this and other known poisonous and infectious plants.

As a result of chemical analysis and experimental studies, Toyama²¹ obtained an acid glucosid, urushiol, from rhus plants; which he believes to be the cause of rhus poisoning.

Hartzell²² reviewed the various ascertained factors which may cause dermatitis herpetiformis and concluded that dermatitis herpetiformis is the result of a toxæmia. The toxins responsible for its symptoms are probably of various kinds, but closely related in composition and of varying origin. The resemblance between it and erythema multiforme and pemphigus probably results from a similarity of the causative agents concerned in those several diseases, and still more, from a similarity if not actual identity of the mechanism concerned in the production of the cutaneous phenomena.

Employing the intradermic method for conducting the anaphylactic food tests Strickler²³ found the greatest number of positive reactions in the urticaria cases; less frequent positive results were obtained in psoriasis, acne vulgaris and rosacea. In none of these cases did improvement follow the corrected diet.

Walker²⁴ contributed an article on the cause of eczema, urticaria and angioneurotic edema and stated that these conditions may be produced in predisposed persons by external exposure and internal injection of proteins not present in food. In the treatment of these cases it would seem advisable to exclude proteins with which the patient may have been in contact as well as food proteins.

Ravitch and Steinberg²⁵ described their experiences in the study of the relationship of focal infections to the etiology of the dermatoses. They believe that focal infections are causative in some cases of erythema, urticaria, purpura and perhaps herpes zoster.

Chipman²⁶ observed eight cases of lichen planus in which tooth infection seemed to be the only etiological factor.

Treatment.

Murray²⁷ demonstrated the streptococcus fecalis as the causative agent in a great majority of the cases of pruritus ani and reported remarkable results obtained by the injection of autogenous and stock vaccine of the streptococcus.

For the local treatment of pruritus ani, Hamburger²⁸ recommended the daily rubbing in of calomel powder.

Motta²⁹ reported a case of nodular leishmaniasis which was cured by intravenous injections of a one per cent. solution of tartar emetic with local applications of a 0.5 per cent. solution of potassium permanganate.

Pardo³⁰ reported the cure of a case of ulcerating granuloma of the pudenda by injecting intravenously a one per cent. solution of tartar emetic.

Martin³¹ noted that during the starvation period in

the treatment of diabetes mellitus, pruritus increased while eczema became milder.

Dudley³² recommended the following methods for the successful treatment of anthrax: 1. injections of an eight per cent. solution of phenol into the surrounding tissues; 2. wide excisions, and 3. injections of anti-anthrax serum.

Criado³³ recommends local applications and the internal administration of adrenalin for the treatment of scleroderma.

Strickler³⁴ demonstrated the influence of intravenous injections of toxins from various plants on the course of dermatitis venenata and suggested its employment in severe cases. It is his impression that it is possible to develop an endermic test for the detection of the particular poisonous plant to which the individual is susceptible. In a few cases which were tested the complement fixation reaction was negative.

The matter of radiotherapy was discussed in several articles. The status of radium when employed externally, its relative value in dermatology and the technic for its application in naevus, tuberculosis, epithelioma and the dermatoses were described by Goosman,³⁵ Moriarta,³⁶ Quigley,³⁷ Aikins,³⁸ Taft,³⁹ Harrison,⁴⁰ Bissell,⁴¹ and others. The success and the limitations of roentgen ray therapy in malignant diseases of the skin were described by Tyler,⁴² Hall⁴³ and MacKee.

Syphilis.

The import of syphilis as a public health problem was emphasized by Heimann,⁴⁴ who states the problem of syphilis to the community resolves itself into the problem of controlling early syphilis.

Pusey⁴⁵ claimed that the venereal rate in the United States army in the field is less than that in any other army in the field and less than 90 per 1,000, the standard mean average rate. The plan of attack on venereal diseases as followed in the United States Army is briefly as follows:

Public Measures—A. Social measures to diminish temptation: 1. The suppression of prostitution and the liquor traffic in the extracantonment zones. 2. The provision of proper social surroundings and recreation. B. The education of soldiers and civilians. 1. The education of the soldiers is accomplished by: (a) lectures, (b) pamphlets, and (c) exhibits. 2. The education of civilians is accomplished by the same measures through organizations like the Y. M. C. A., *et cetera*.

Personal Measures—A. Instruction in prophylaxis. B. Prophylaxis stations; 1. Regimental infirmaries. 2. Civil centers. C. Medical cure.

Irvine⁴⁶ showed that there is a lack of teaching of syphilis and its problems in the medical schools. It is deplorable that this subject is being neglected by the faculties in a large majority of our schools.

Fordyce⁴⁷ stated that twenty per cent. of syphilitics have nervous involvement and urges the early employment of modern diagnostic and therapeutic methods.

Medalia⁴⁸ described an original method for staining the *Spirochaeta pallidum* and claimed simplicity as the advantage of the method. No special reagents or staining solutions are necessary excepting a one per cent. aqueous solution of sodium carbonate and Wright's blood stain.

Nogouchi⁴⁹ devised a successful method for performing the Wassermann test without the use of fresh guinea-pig serum and fresh sheep corpuscles.

Detweiler⁵⁰ made a survey of the methods in vogue for performing the Bordet-Wassermann test and its modifications and concluded that there is need for the

establishment of a standard technic for workers in public health laboratories.

Stillian⁵¹ evolved a standard positive control for Wassermann tests which gives an accurate gauge of strength of reaction.

Symmers, Darlington and Bittman,⁵² as a result of findings in post-mortem investigations, doubt the value of the Wassermann test. In a reply to this article Larkin, Levy and Fordyce⁵³ disagree with the conclusions of the former and emphasize the true value of the test for diagnostic and therapeutic purposes. They base their opinion on extensive clinical and serological findings as well as on studies in the pathology of syphilis.

After a most careful study covering a period of ten years and including 750 necropsies, Warthin⁵⁴ revealed 300 cases of syphilis. The diagnosis depended upon the discovery of definite microscopic lesions, seventy-five per cent. of which contained spirochaetae. The findings would indicate a high percentage of latent syphilis and explain a large proportion of chronic organic disturbances with ill-defined etiology.

Kolmer and Mastin⁵⁵ were able to obtain globules of mercury from the necrotic vertebrae and soft inflammatory tissue of an aneurysm.

Levison⁵⁶ claimed that aortitis is present in 5 to 10 per cent. of all patients with syphilis.

McDonald⁵⁷ reported the rare occurrence of acute yellow atrophy from syphilis.

Schamberg, Kolmer, Raiziss and Gavron⁵⁸ demonstrated by means of animal experiments that the chief avenue of absorption of mercury, when applied by inunction, is by the skin. Rabbits inspiring a mercury-laden atmosphere may absorb considerable quantities of mercury through the lungs, but the respiratory absorption is far less important than the cutaneous absorption.

Arsphenamine is the name adopted by the Federal Trade Commission for the hydrochlorid of 3-diamino-4 dihydroxy-1-arsenobenzene, in other words, salvarsan. Numerous reports have appeared relating the advantages and disadvantages of the products manufactured by the authorized laboratories. In brief, it may be stated that as a result of his experience in about two thousand injections with the American products the reviewer is convinced that they are as efficient as the foreign drugs and all reactions which may occur result from errors in technic of administration or contraindications residing in the patient. Arsenobenzol (Schamberg) differs from salvarsan (Metz) in that it is less soluble.

In his summary on febrile reactions to arsenobenzol Goribeaue⁵⁹ claims that fever developing a few hours after the injection is connected with the syphilitic infection itself and is equivalent to a positive Wassermann reaction. But when fever develops or is continuous during the interval between injections, it is a sign of intolerance or of intercurrent disease, and calls for moderation, suspension or complete arrest of specific treatment.

Dennie and Smith⁶⁰ studied their findings in the blood and cerebrospinal fluid in syphilis and concluded that the syphilitic anti-body in the cerebrospinal fluid originates both in the blood stream and the central nervous system.

Lowrey⁶¹ demonstrated that either because of special invasive powers, susceptibility of the nervous system, or drug-fastness of the organism, neurosyphilis may develop despite thorough remedial measures.

After studying the spinal fluid in a large number of

syphilitics before, during and after treatment Dujardin⁶² concluded that there is danger of a violent meningeal reaction from an inadequate course of arsenical treatment. On the other hand, nothing is more encouraging than to watch the effect on the meningeal reactions of a properly conducted course of arsenical treatment.

Sharpe⁶³ described experimental and clinical evidence on the value of injections of salvarsan into the lateral ventricles of paretics in the early stage.

Barlot⁶⁴ advised for the treatment of paresis and tabes the increase in the permeability of the meninges to arsenic by lowering the intraspinal pressure. The method consists in the intravenous administration of salvarsan followed in 20 minutes by lumbar puncture and the almost dry tapping of the spine. He believes that the anti-bodies residing in the blood serum passing into the spinal fluid play a more important role than the minute proportion of arsenic.

Watson⁶⁵ believes that the intraspinal injection of salvarsan relieves the urologic symptoms and improves serologic findings in neurosyphilis.

Bibliography.

- ¹MacKee, George M. and Parounagian, Mihran B.—Folliculitis Urythematosa Reticularis. *Jour. Cut. Dis. and Syph.*, xxxvi, No. 8, 339.
- ²Pollitzer, S.—Ossification in a Case of Scleroderma. *Ibidem*, No. 5, 271.
- ³Matsumoto, Ichi.—On a New Form of Punctiform Keratoderma. *Ibidem*, No. 5, 280.
- ⁴Smith, Clayton S.—Chemical Changes in the Subcutaneous Fat in Sclerema Neonatorum. *Ibidem*, No. 9, 436.
- ⁵MacKay, Hugh and Boyd, William.—A Contribution to the Pathology of Mycosis Fungoides. *Jour. Ibidem*, No. 11, 521.
- ⁶Reede, Edward Hiram.—The Role of the Vegetative Nervous System in Diseases of the Skin. *Ibidem*, No. 11, 505.
- ⁷Mondolfo, E.—Primary Diphtheria of Skin and Genitals. *Revista Critica di Clinica Medica*, 1918, xix, No. 4, 37.
- ⁸Rasch, C.—Dermatitis from Safety Matches. *Ugeskrift for Laeger*, 1918, lxxx, No. 7, 258.
- ⁹Stiell, W. F.—Impetigo Contagiosa as a Possible Cause of Acute Nephritis. *Practitioner*, 1918, C, No. 4, 368.
- ¹⁰Wise, Fred and Levin, Oscar L.—Cutis Verticis Gyrata. Report of a Case. *Interstate Medical Jour.*, 1918, xxv, No. 5.
- ¹¹Wise, Fred.—Acanthosis Nigricans Following Decapsulation of the Kidneys. Report of a Case. *Jour. Cut. Dis. and Syph.*, 1918, xxxvi, No. 5, 35.
- ¹²Wise, Fred.—Urticaria Beginning in Adult Life. *Interstate Medical Journal*, 1918, xxxvi, No. 1.
- ¹³Foerster, O. H.—A Painful Nodular Growth of the Ear. *Jour. Cut. Dis. and Syph.*, 1918, xxxvi, No. 3, 154.
- ¹⁴Wise, Fred.—Relation Between Lupus Erythematosus and Tuberculosis. *New York Med. Jour.*, 1918, cvii, No. 25, 1164.
- ¹⁵Weiss, S. and Singer, J. J.—The Relation of Lupus Erythematosus and Tuberculosis. *Amer. Jour. of Med. Sciences*, 1918, civ, No. 4, 528.
- ¹⁶Wise, Fred.—Miliary Tuberculosis of the Skin, Lichen Scrofulosorum and Papulo-Necrotic Tuberculids. *Jour. Cut. Dis. and Syph.*, 1919, xxxvi, No. 1.
- ¹⁷Harris, Frederick Gillette.—The Etiology and Pathology of Skin Cancer. *Ibidem*, No. 2, 68.
- ¹⁸MacKee, George M.—The Treatment of Cutaneous Cancer. *Ibidem*, No. 2, 93.
- ¹⁹Morrow, Howard.—Two Cases of the Bowen Type of Epithelioma. *Ibidem*, xxxvi, No. 1, 1.
- ²⁰Lain, Everett S.—Dermatitis Lycopersicum Esculentum. (Tomato Plant). *Jour. Amer. Med. Assn.*, 1918, lxxi, No. 14, 1114.
- ²¹Toyama, I.—Rhus Dermatitis. *Jour. Cut. Dis. and Syph.*, 1918, xxxvi, No. 3, 157.
- ²²Hartzell, M. B.—Dermatitis Herpetiformis; Its Etiology and Relationship to Certain Members of the Bullous Group of Diseases, Especially to Erythema Multiforme and Pemphigus. *Ibidem*, No. 11, 497.
- ²³Strickler, A.—Food Anaphylaxis and Methods of Making Tests. *Penn. Med. Jour.*, 1918, xxi, No. 12, 737.
- ²⁴Walker, I. Chandler.—Causation of Eczema, Urticaria and Angioneurotic Edema. By Proteins Other Than Those Derived From Food. *Jour. Amer. Med. Assn.*, 1918, lxx, No. 13, 896.
- ²⁵Ravitch, M. L. and Steinberg, S. A.—Relation of Focal Infections to Certain Dermatoses; Further Observations. *Ibidem*, lxxi, No. 16, 1273.
- ²⁶Chipman, Ernest Dwight.—The Etiology of Lichen Planus. *Ibidem*, No. 16.
- ²⁷Murray, Dwight H.—Etiology and Treatment of Pruritus Ani: Summary of Eight Years Original Research Work. *Ibidem*, No. 18, 1449.
- ²⁸Hamburger, O.—Calomel in Treatment of Pruritus Ani. *Uges. for Laeger, Copenhagen*, 1918, lxxx, No. 32.
- ²⁹Motta, A. Da.—Nodular Leishmaniasis. *Amaz. Med., Mo-naos*, 1918, No. 1, 13.
- ³⁰Pardo, Vincent.—Ulcerating Granuloma of the Pudenda. *Jour. Cut. and Syph.*, 1918, xxxvi, No. 4, 206.
- ³¹Martin, R. G. San.—Starvation Treatment of Diabetes. *Chron. Med.-Quir., Havana*, 1918, xlv, No. 1, 20.
- ³²Dudley, D. G.—Successful Treatment of Anthrax by Various Methods. *Jour. Amer. Med. Assn.*, 1918, lxx, No. 1, 15.
- ³³Criado, M. F.—Scleroderma with Nodules. *Med. Ibero*, Madrid, 1918, ii, No. 10, 29.
- ³⁴Strickler, Albert.—The Treatment of Dermatitis Venenata by Vegetable Toxins. *Jour. Cut. Dis. and Syph.*, 1918, xxxvi, No. 6, 327.
- ³⁵Goosman, Charles.—The Relative Value of Radium and X-rays in Dermatology. *Urologic and Cut. Review*, 1918, xxii, No. 1, 15.
- ³⁶Moriarta, D. C.—Status of Radium Externally. *Ibidem*, 25.
- ³⁷Quigley, D. T.—The Technique of Radium Application. *Ibidem*, 45.
- ³⁸Aikins, W. A. B.—Radium in Tuberculosis of the Skin. *Ibidem*, 40.
- ³⁹Taft, Robert.—The Treatment of Keloid by Radium. *Ibidem*, 31.
- ⁴⁰Harrison, Frederick C.—The Treatment of Keloids by Radium. *Ibidem*, 19.
- ⁴¹Bissell, Joseph B.—Radium in the Malignant Lesions of the Neck and Face, 15.
- ⁴²Tyler, Albert F.—Roentgen Therapy in Epithelioma. *Ibidem*, 65.
- ⁴³Hall, Frederick B.—Treatment of Malignant Skin Lesions with the X-ray. *Ibidem*, 85.
- ⁴⁴Heimann, Walter James.—Early Syphilis As a Public Health Problem. *Amer. Jour. Syph.*, 1918.
- ⁴⁵Pusey, William Allen.—Handling of the Venereal Problem in United States Army in the Present Crisis. *Jour. Amer. Med. Assn.*, 1918, lxxi, No. 13, 1047.
- ⁴⁶Irvine, G. H.—Syphilis and Venereal Diseases As a Public Health Problem. *Ibidem*, 1029.
- ⁴⁷Fordyce, John A.—Neurosyphilis. Its Diagnostic and Economic Importance. *Ibidem*, 1023.
- ⁴⁸Medalia, Leon S.—Staining for the Spirochaeta Pallida in Smear Preparations, lxx, No. 13, 914.
- ⁴⁹Nogouchi, Hideyo.—A Method for Facilitating the Serum Diagnosis of Syphilis Under War Conditions. *Ibidem*, No. xvi, 1157.
- ⁵⁰Detweiler, H. K.—The Technic of the Bordet-Wassermann Reaction. *Amer. Jour. Syph.*, 1918, No. 1, 120.
- ⁵¹Stillians, Arthur William.—Titration of Complement for Its Power to Combine in the Syphilitic System. *Jour. Cut. Dis. and Syph.*, 1918, xxxvi, No. 5.
- ⁵²Symmers, Douglas, Darlington, Charles G. and Bittman, Helen.—The Value of the Wassermann Reaction. An Indicated by Post-mortem Investigation in Three Hundred and Thirty-one Cases. *Jour. Amer. Med. Assn.*, 1918, lxx, No. 5, 279.
- ⁵³Larkin, John H., Levy, I. J. and Fordyce, John A.—The Value of the Wassermann Reaction. A Reply. *Ibidem*, No. 20, 1589.
- ⁵⁴Warthin, A. S.—The New Pathology of Syphilis. *New York Med. Jour.*, 1918, cxvii, No. 2, 71.
- ⁵⁵Kolmer, John A. and Mastin, E. V.—Globules of Metallic Mercury in the Tissue Findings in an Aortic Aneurysm with Erosion of the Vertebrae. *Jour. Amer. Med. Assn.*, 1918, lxx, No. 18, 1290.
- ⁵⁶Levison, Louis A.—Syphilitic Aortitis. *Amer. Jour. Syph.*, 1918, ii, No. 1, 44.
- ⁵⁷McDonald, S.—Acute Yellow Atrophy in Syphilis. *Brit. Med. Jour.*, 1918, i, No. 2976, 76.
- ⁵⁸Schamberg, Jay Frank, Kolmer John A., Raiziss, George W. and Gavron, Joseph L.—Experimental Studies of the Mode of Absorption of Mercury When Applied by Inunction. *Jour. Amer. Med. Assn.*, 1918, lxx, No. 3, 142.
- ⁵⁹Goribeau.—Febrile Reactions to Arsenobenzol. *Paris Medical*, 1918, viii, No. 3, 97.
- ⁶⁰Dennie, Charles Clayton and Smith, D. O.—The Blood and Cerebrospinal Fluid in Three Hundred Known Cases of Syphilis. *Amer. Jour. Syph.*, 1918, ii, No. 1, 101.
- ⁶¹Lowrey, Lawson Gentry.—The Treatment of Early Syphilis in Relation to the Development of Neurosyphilis. *Ibidem*, 138.

*Dujardin, B.—Meningeal Reactions of Syphilis. *Archives Medicales Belges*, lxxi, No. 6, 706.

*Sharpe, Norman.—The Intraventricular Treatment of Paresis. *Amer. Jour. Syph.*, 1918, ii, No. 1, 1.

*Barlot, J. Henry.—Permeability of the Mininges to Arsenic in Paresis and Tabes. *Jour. Amer. Med. Assn.*, 1918, lxx, No. 3, 147.

*Watson, Ernest W.—The Place of Intraspinal Treatment in Urology. *Ibidem*, No. 5, 296.

161 East 79th Street.

General Scientific

AVIATION FOR THE TUBERCULOUS AND THE PERNICIOUSLY ANEMIC.

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Brooklyn, N. Y.

Now that aviation has attained such a great development we are beginning to think of how flying at various altitudes may be utilized, perhaps, in the treatment of disease, for the physiological investigations which have been made by the medical officers of various aviation services certainly possess therapeutic connotations.

The Medical Research Board of the United States Army (Air Service) has made and reported many observations which irresistibly suggest the apparent feasibility of employing controlled altitude in the therapy of tuberculosis. The medical workers on this board have found that a number of things happen when individuals are studied at various altitudes within their physiological capacity, practically all of which are desirable in tuberculosis, but they have seemingly missed the rather obvious therapeutic implication.

For example, altitude affects lung ventilation, the breathing growing deeper as the individual ascends; the circulation in the tissues is improved; low blood pressure is raised; the percentage of hemoglobin runs up.

Now of course the value of altitude in the treatment of tuberculosis has been long established, and because of the purity and dryness of mountain air in such places as Saranac and Davos we get a stimulating effect upon the appetite and nutrition. But it seems to the writer that the point made by Dr. Charles E. Quimby about twenty years ago must be taken into consideration along with the physical effects noted by the observers of the Air Service, in estimating the value of altitude in the therapy of tuberculosis, and that point is that when air is rarified, as by altitude, a pulmonary hyperemia ensues. This hyperemia would necessarily contribute to reparative and phagocytic processes.

Why go to Colorado or Davos if the same altitude can be attained over New York or St. Louis?

There is no use quibbling over the value of altitude in the treatment of tuberculosis—we know very well where most of the modern sanatoria are located. We know that cold is not felt acutely at high altitudes owing to diathermancy; we know that the mobility and expansibility of the thorax increase; and we know that in addition to an enhancement of the hemoglobin and red-cell content of the blood there is a marked lymphocytosis, which Barted, Bergel, Marie and Fliessinger have interpreted as a defensive mechanism against the tubercle bacillus. Von Muralt has argued that residence at high altitudes favors proliferation of pulmonary connective tissue, "the true reparative process in phthisis," in the words of Fishberg. The latter expert states that a pleural effusion showing no tendency to absorption will occasionally disappear after a stay in the mountains,

and he is not inclined to overestimate the good effects of high altitude.

Turban thinks that pulmonary hemorrhage is less frequent at high altitudes than at the level of the sea, while Fishberg has noted that some patients, disposed to bleed in the city, lose their tendency to hemoptysis in the mountains.

In cases presenting disturbances in the structure or function of the heart, blood vessels or nervous system, Fishberg warns against a sudden sending of such patients to high altitudes. A medium altitude must first be tried, and if no harm is done they may be permitted to go as high as 6,000 feet.

Tuberculous subjects might be trained to constitute the personnel of our proposed aerial mail service, to make meteorological observations, to do radio and aerial photographic work, and to plot coast lines, river courses, etc. In other words, useful and remunerative service might be conjoined with therapeutic flying and balloon work. The problem of healthful employment for the tuberculous, always a difficult one, could perhaps be partially solved in this manner.

The newly created and extensive air services of all the belligerent nations, a product of war, now lie ready for the purposes of peace.

The Medical Research Board of the United States Army might very well turn its attention now to this phase of experimental therapy. Tuberculous medical officers and soldiers and sailors similarly afflicted should make up the first crews. They would be far happier in the air than cooped up in some Government sanatorium, and would be more likely to get well.

Turning from the subject of controlled altitude therapy in tuberculosis, let us consider the possibilities with respect to pernicious and other grave anemias. Our clinical resources, including transfusion, are by no means successful in these deplorable states. It seems to the writer that a great hope looms up in the light of the reports from the Research Laboratory at Mineola (Army Air Service), for the workers there have noted hemoglobin increases of from four to nine per cent. in many of the men even after short flights. May it not be that in gradual acclimatization of our perniciously anemic patients to high altitudes, maintained for considerable periods of time, we shall find the blood-making stimulus so far undiscovered by our internists? For such work the balloon would probably serve a better practical purpose than the aeroplane.

115 Johnson Street.

CONGENITAL THYMOMEGALY.

J. EPSTEIN, M. D.

New York.

Congenital thymomegaly, or congenital thymus enlargement, is not a frequent anomaly. The abnormally enlarged thymus may cause respiratory distress in the newly born through pressure on the trachea, or it may manifest itself later in life as a part of a constitutional syndrome, known as status lymphaticus or status thymicolympathicus. The lymphatic child shows a structural and functional inferiority which makes it subject to various constitutional diseases and occasionally to sudden death.

The weight of the normal thymus at birth is about ten grams and it measures about one and a half inches in length and one inch in width. It is situated in the upper anterior mediastinal space at the entrance to the chest cavity, extending from the lower border of

(Continued on p. 21)

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Why Not?

The chaos in some parts of Europe has at least one suggestion in it. There men are attempting to follow the advice of lunatics; here we follow the counsel of sane men—and the results do not differ greatly. Sane men are not necessarily wise counsellors, and their judgment and advice do not necessarily represent antitheses of what the lunatic would submit for our consideration, if we should permit him to do so.

So a new form of government looms up. Anything political or sociological is possible to-day (indeed anything at all is quite possible). So we suggest that our hospitals for the insane become parliament houses which shall promulgate the consensus of lunatic opinion on all questions of the day as they arise or as they shall be submitted to the parliament houses for decision. Action on the part of the people shall then take a course exactly opposed to the opinion rendered. That is to say, we shall do just the opposite to what the lunatics decree by majority vote.

This system ought to be tried. The results could not be any worse than what we have witnessed under the old forms of government. They might be very good. The theory is sound, for if we put people in hospitals for the insane it is presumably because we believe that their opinions and acts run exactly counter to what they should. Why not, then, utilize this valuable material in inverse fashion? Our lunatics would be free from the influences which vitiate the opinions and acts of our sane statesmen and legislators and would render their decrees honestly even though foolishly; they would be in deadly earnest—and of what statesman or legislator can we say that?

Every form of government has been tried but this, and we claim originality for the idea. We have even

had a government in which the opinions of the minority at one time ruled (Poland), which is not a whit less fantastic than our proposal. Now we have the incredibly pure democracy of the Soviet—actual government of the people, by the people, for the people—and what could be more insane than that, or more inviting to crush, from the malignant standpoint of our Black Hundred?

Each State Hospital should send delegates to a central body at the capital of the State, for example, Albany, selected from among the worst cases. These central bodies, in turn, should send their most raving patients to Washington, to constitute a kind of Congress.

Only one possible objection can be urged against this scheme. It may be contended by cynical persons that the lunatics could not hope to compete successfully with our present statesmen and legislators, and that we already have devised defensive mechanisms which enable us to defeat the purposes of our Solons.

In conclusion, we claim for our new form of government that it would insure permanent peace, for there can be no doubt that the lunatics would be exceedingly bellicose whenever questions of national "honor" arose. It is not a League of Nations that the world is awaiting, but our league of lunatics.

Our Part in Reconstruction.

Since the health of the people depends upon wholesome conditions, social and political, we as physicians are concerned vitally with the larger questions of the day. The nutrition or very life of every child and adult may well depend upon how we are "ruled," and in Great Britain the profession is taking direct steps to secure a larger representation in Parliament. The relation of nervous and mental disease to the social order is very real, and we cannot ignore our obligations to see to it, in so far as in us lies, that the world becomes a more decent and therefore a more healthful place in which to live.

It remains to be seen whether we are competent to do our share toward making the world more decent than it was before the war, which to physicians means so much in the way of preventive medicine.

Among other things, we must realize the enormity of suppressive measures on the part of one class against another, whether the suppressing class be the Bolsheviks in Russia or the bourgeoisie and their masters elsewhere. It is these suppressive measures, in peace times only less than in war times, that hinder normal progress, including that of medicine, which, like all else, thrives or lags according as the environment is a healthful or a pathologic one.

Have we the courage to declare an amnesty and invoke love in place of force in world affairs, or must the class war continue to set at naught the democratic ideal?

German Medicine and the Revolution.

Now that the long prayed for revolution, made possible only by military victory, has taken place in Germany, we may expect to see the well-known German thoroughness manifest itself in reversing the social order which existed before the war.

There will surely be some changes in German medicine. German science will become more human than of yore, and the art of medicine be cultivated in a spirit different from that exemplified by the medical exponents of Kultur.

Medicine, along with everything else in Germany, will be modified radically but beneficently. It would be interesting to speculate about the specific changes that will take place in unison with political and economic turnovers.

What Lord Lansdowne foresaw and tried to prevent for rather obvious reasons is soon to transpire.

Forward-looking men wanted revolution and pressed for war to a finish. There is no need to fear the fruits of their efforts, despite the croakings of the reactionaries. And medicine may confidently be expected to share in the new humanism.

We owe no thanks to the pacifists who did their best to thwart this consummation. In their namby-pamby preoccupations they could not see that the flaming dawn of the German revolution could not be unless a crushing military victory were achieved.

Along with the soul of Germany we have set medicine free in that land.

Ride and Be Well.

In these days of the automobile one hears little of the cult of walking for the sake of health or the beauties of nature—or for any other purpose.

We suspect that our fathers made a virtue of a necessity, and invested walking with various esthetic joys and physiological advantages that may not have been altogether real.

It is noticeable that our most ardent seekers after health are not met with about the countryside—on foot.

It is not unlikely that walking was overdone by the earlier zealots. Many an arch and myocardium were probably sacrificed to the special divinity of walkers.

Now that we recall it, most of the walkers of the type who used to boast of their twenty miles a day were not distinguished for robust health, though of course many of these fanatics were health cranks who first damaged themselves through freak dietaries and then wore themselves out on the road. A man who will walk twenty miles a day for his "health" is pretty sure to commit other excesses.

We have all noticed how our medical friends who were once upon a time strong for hikes have gradually made themselves part of their machines, like a new kind of centaur race. And we are not speaking of old duffers, either.

There's a divinity that shapes our ends so that they finally conform perfectly to the anterior anatomy of a motor car.

And we suspect that between what we get out of our automobiles hygienically and our saner methods of living in general we are happier and healthier than the gaunt pedestrians of yore.

The Apologetics of Alcoholism.

Assuming that everything is true that has been alleged about alcoholism as a disease factor, what will be the effect of legislation against the production of alcohol with respect to the incidence of disease attributable to the demon rum and with respect to the decimation of the ranks of those who, by falling victims to its allurments, have proven themselves undesirable members of society?

Assuming, again, that undesirable members of society ought to be gotten rid of in some way, how shall we bring about what alcohol used to effect? We know of no way.

It seems to us that a strange paradox is likely to make itself manifest in the practical workings of pro-

hibition, if it turns out to be as thorough-going as intended. Will there not be a lot of queer people bred through prohibition who should otherwise, in a "natural" course of events, have been shuffled off? What more likely than that many of these queer folk will become reformers who will do for tobacco, tea, coffee and other poisons what their "creators" and "foster parents" have done for alcohol?

Finally, the trend so started may be conceived as reaching into the domain of domestic life in all its aspects; in other words, there will be a minute regulation of the personal life *ad infinitum*.

In the end, there may well be a "class war" between the regulatory fanatics with whom the world will team, and who by right should have been permitted to poison themselves to death, and the group standing for personal liberty and a natural working out of eugenic forces.

The thing that we think we have killed in Flanders fields has got to be fought in other phases, for under the guise of reform men will seek to impose their autocratic will upon other men forever and aye, not perhaps in the shape of militarism, but in other ways just as objectionable. The forcible shaping of public opinion and its rigid imposition will vie with tyrannical regulation of private life.

The artificial conservation of the unfit now in vogue will create conditions more vicious than those which the reformers are pleased to see in alcoholism and a few other scavengers.

Whetham (*Heredity and Society*) furnishes us with a cold-blooded but just view of how alcoholism has tended to purify the race. A process, similar to that which is slowly rendering the nations of the world more and more immune to specific diseases, has been going on with respect to alcoholic excess. Those specially susceptible to the charms of alcohol tend to die younger than those able to resist. In natural conditions, therefore, they tend to leave fewer children, and the race gradually contains fewer and fewer individuals liable to alcoholism.

Now, however, we are invited to join in a movement which will save all these queer people, with results which we have attempted to outline roughly. Compulsory reformation of the public has more dynamite than balm in it.

Perhaps we are too pessimistic. These things move in cycles and the sober second thought of the people may bring about a revulsion similar to what we have witnessed with respect to tobacco in the course of the war. Come to think of it, there was a strong movement setting in against tobacco before the war, but it has come to be considered anything but a crime to furnish the boys in Europe with smokes.

If this revulsion comes, will the law stand?

There is hope.

To Teach Speech Correction.

Walter B. Swift, M.D., of Boston, has just been appointed Instructor in Speech Disorder in the Cleveland Kindergarten Training School. He will train up all the kindergarten teachers to take speech correction into all the kindergartens of Cleveland. He has already found a kindergarten speech clinic in the school which will be continued permanently for practice work. This new appointment is an outgrowth of a kindergarten course on speech correction and the first kindergarten clinic in the world which he founded 2 years ago in the Wheelock Kindergarten School of Boston. Dr. Swift regards this Cleveland appointment as most important because it is the spread of prevention of speech disorders into a large school curriculum. This is a new idea of his and is arousing great interest among kindergarten teachers.

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

A Gem From the Federal Department of Labor.

From the Federal Department of Labor has issued a report on "Juvenile Delinquency in Rural New York" which for warped vision and lack of generous human interpretation "beats the Dutch."

The following extracts are given as exemplifying the curious points of view of the perpetrators of the report:

Aubrey, the ten-year-old son of a bad woman who left the village. He has eyes that are "bright and expressionless like a bird's." In Sunday School he behaves badly but knows his lessons. He bosses the class. When the others enrage him he tries to stab them.

Lizzie, the seventeen-year-old daughter of the village drunkard and horse doctor. "She swears like a pirate, fluently and picturesquely." Her mother works out and her father stays home and reads the paper. "It is said that the last town in which he lived gave him \$25 as an inducement to move away."

Martin, aged eleven, the son of a village minister who doubled his income by serving as a barber; his mother was the daughter of the village saloon keeper. Martin, his mother dead and his father disappeared, is left with his mildly insane grandmother and his grandfather, who lets him drink beer in the saloon.

Horace, a minister's son, playmate of Martin. His widowed mother wishes him to become a "professor of piano playing." He desires to be an engineer. He runs away from school and pretends that he has "stomach trouble."

Bert, the son of a bottle drinking father. The boy has been arrested for two robberies, but Miss Claghorn credits him with kindness of heart. He once bought a dozen pumpkin pies and gave them to a church supper. His father sends him to town twice a week to take boxing lessons. His mother swears.

Robert, aged eleven, with watchful, nervous eyes. His father, who is the school principal, once knocked him down three times before the whole school and told the woman teacher that pupils must be treated roughly. The Prussian idea.

Esther, eighteen, and handsome, the brightest girl in her village. When she was urged to continue at school she said: "What's the use; I'd still be a Todd."

Carl, a petty thief at fifteen, but a hard worker. "He must do something after school, so he drives hundreds of pounds of nails into hundreds of feet of lathing and produces more chicken coops than any normal family could use in a hundred years."

Frank, a timid boy of thirteen, who lives under the best influences, spends all his spare time at home reading history and steals whenever he gets a chance.

We have known sociologists whose eyes are "bright and expressionless like a bird's." Was there ever a real boy who did not behave badly at times in Sunday school? Many of us certainly never knew our lessons very well. As to bossing the class, we will wager that Mr. McAdoo bossed his unmercifully.

One of the crimes of Lizzie's father seems to consist in the fact that he is a horse doctor. That, to us, would seem to betoken a saving grace. The old man loves horses. Well?

Martin's father, the minister, probably received \$300 per annum from his congregation, and very properly eked out a living through the exercise of the tonsorial art. Well, well! And Martin's mother was the daughter of a saloonkeeper—hear! hear!

Horace runs away from school and pretends that he has stomach trouble. Shades of Huckleberry Finn and James Whitcomb Riley!

Bert is redeemed through the gift of pumpkin pies; but no—he takes boxing lessons. It's a pity that so many of our boys fail to get the benefit of this degrading exercise.

Robert has nervous, watchful eyes. In some successful man of affairs we should probably think this a mark of alertness and snap. Why indict Robert because of his father's assault and battery?

Esther is called the brightest girl in the village. Perhaps her revolt against the village school system is the best proof of it, though of course the report doesn't take such an ingenuous view.

Carl is very evidently an example of excess energy. Something to build on there. His acquisitiveness surely marks him out as a promising recruit for big business.

How can Frank be under the best influences if he steals whenever he gets a chance? Something wrong here with somebody else besides Frank. His persistent reading of history seems to indicate something good in him, instead of something evil. Here we have Woodrow Wilson's writings put upon a par with the Jesse James stories!

And Aubrey's mother was a bad woman, the fact probably being that she was an unfortunate girl seduced because of innocence rather than viciousness. She was a bad woman because she was an unmarried mother! What would Ellen Key say to this?

We should like to have the privilege of reporting as Case X some sociologist selected from the staff of the Federal Department of Labor, or from that of the New York School of Philanthropy.

On the basis of this gem of a report somebody besides the rural delinquents ought to be similarly indicted. Surely in these days there is better use for human talents than that exemplified by the labors of our Pharisaical sociologists, but these precious "delinquents" are usually indifferent if not actually hostile to fundamental reform, characterizing all radically minded persons as Bolsheviki.

(Continued from p. 18)

the thyroid to the upper part of the pericardium, resting on the trachea and its adjacent great vessels and nerves. The thymus is remarkable in its histological and functional evolutionary changes. It begins its existence during early embryonic development as an epithelial structure; later it is gradually replaced by lymphatic tissue leaving only a few epithelial cells, the concentric corpuscles of Hassal. At birth, the thymus is a purely lymphatic organ. It gradually enlarges up to the age of two years, when it reaches its height in structural and functional activity. From the second year of life to puberty the thymus undergoes very little change. After this age it gradually atrophies and is replaced by connective tissue and fat. The histogenetic cycle of epithelial, lymphatic, and connective tissue changes through which the thymus gland passes, indicates a varied functional activity. Its temporary existence indicates a temporary usefulness which evidently is of the utmost importance during the most active period of life, from infancy to childhood and from childhood to adolescence. The thymus seems to have some controlling influence in the development of the bony framework, central nervous system, the sexual glands, and metabolism, but its real function in the life history of the child is still uncertain, its exact place in the endocrine family is not yet definitely known, and the reason for its congenital overgrowth is a profound embryologic secret.

The normal thymus may persist beyond its allotted time after puberty in conditions of lymphatism, or status lymphaticus, or the newly born child may come to this world with an abnormally large thymus as a part of a general lymphatic hyperplasia, or rarely as

an isolated congenital abnormality, and give rise to thymic stridor, or thymic death. Thymic stridor is characterized by a constant respiratory distress, an inspiratory retraction of the chest wall, and a vibratory interrupted rattling or hissing sound, more marked on inspiration than expiration. There may be little or no cyanosis. Occasionally the respiratory difficulty is periodic with attacks of severe dyspnea, great cyanosis, anxious expression, cold extremities, and other signs of impending death. Thymic death is a tragedy which may come either during an attack of severe respiratory distress, or it may occur suddenly as the result of physical or mental shock. The real cause of sudden thymic death is still obscure. The enlarged thymus may become rapidly congested, and by pressure on the trachea or the neighboring vessels and nerves cause sudden fatal asphyxia or cardiac paralysis. Thymic respiratory disturbance is frequently mistaken for bronchitis or a persistent mild infection of the upper respiratory tract as in the following case.



Fig. 1.—Baby T., one month old, congenital thymomegaly, stridor, mouth open, alae nasi dilated.

I was called to see baby T., one month old, who, the mother claimed, was suffering from a cold since birth, and for which she wanted some medicine. The baby was of full term, normal birth, and breast fed. He was the fourth child, the other three children as well as the parents were all well. When the baby was a few days old the mother noticed that he would become slightly blue when nursing and had some difficulty in breathing. At the age of about a week the infant began to breathe heavily with a constant loud noise. The mother blamed the attending physician at the confinement for letting the child catch cold when he was born. On examination, the striking feature was the stridor, which was so loud that it could be heard in the next room. The sound seemed like a blending together of a snoring, hissing and rattling noise. With each inspiration there was a retraction of the entire chest wall. The alae nasi were constantly dilated and the mouth open, as in an effort to breathe, which is shown in Figure 1. There was no marked cyanosis. Palpation and auscultation revealed an almost uniform propagation of sound from the upper respiratory region through the bronchial tree to the chest wall. The stridor was of the same quality all over the chest except that it diminished in intensity in its transmission from the upper to the lower pulmonary region. It was at once apparent that the child was suffering from some obstruction in the upper respiratory system. There was no evidence of obstruction in the nose or throat, but on percussion there was a marked dullness over the upper sternal region extending from below



Fig. 2.—Baby T., one month old, radiograph of large thymus.

the clavicles on both sides to the cardiac region on the left and to near the hepatic region on the right. There was more dullness on the right of the midsternum than on the left, as is shown in the radiographic shadow in Figure 2. It was then evident that the condition was a congenital thymomegaly, or congenital thymus hyperplasia, which caused a tracheostenosis with respiratory distress and stridor. There was no general enlargement of the superficial lymphnodes. The heart was negative. Liver and spleen palpable. Abdomen negative. Weight six pounds and eight ounces. Height nineteen and a half inches. Head thirteen inches. Chest twelve inches. Abdomen eleven and a half inches. A diagnosis of congenital stridor due to thymic pressure was then made.

The prognosis is uncertain. The child may succumb during an attack of severe dyspnea, or a sudden shock may cause sudden death. Drug treatment is of no avail. X-ray therapy may do some good. As the child grows older, the thymus undergoes atrophy, the pressure from the trachea and the adjacent vessels and nerves is relieved, and the stridor ceases.

While the hyperplastic thymus is in itself of great pathologic importance as a cause of congenital dyspnea and occasionally instant death, it is also of considerable importance in the symptom complex of lymphatism or status lymphaticus. The lymphatic child is usually of a pale, pasty appearance with the facies of hypertrophic tonsils and adenoids. It may be well nourished but weak and of low resistance. The superficial and deep lymphnodes as well as the spleen are enlarged. The child may be rachitic, suffer from chronic eczema, or show evidence of scrofulosis. There may be a retarded sexual development or cryptorchidism. Lymphatic children bear infectious diseases badly and may die suddenly from such causes as slight operations, anesthesia, rapid immersion in cold or hot water, or even intense emotional excitement. In adults, status lymphaticus presents a well-defined anatomical and clinical picture. The lymphatic male shows the general bodily contour of the female type. There is a scanty growth of hair on the face, under the arms, and in the pubic region. The pubic hair has the female outlines. There is a persist-

ent thymus and a general hyperplasia of the lymphnodes and spleen. The genitals are poorly developed and there may be a deficiency in sexual vigor. In the female, external evidence of lymphatism is not so marked. In addition to a general lymphatic overgrowth there is a delicacy and thinness of the body, scanty growth of hair, poor breast development, delayed and deficient menstruation, and an infantile uterus. In all cases of lymphatic overgrowth there is a cardiovascular undergrowth. The heart is small, the myocardium weak, and the blood vessels narrow and delicate. There is anemia, weakness, palpitation, cardiac dyspnea and low blood pressure. The lymphatic patient lacks vitality and finds it difficult to stand the stress and strain of a busy life.

222 East Broadway.

Special Article

THE PREVENTION OF INFLUENZA.

At the meeting of the American Public Health Association, held in Chicago, December 9-12, 1917, an editorial committee prepared a working program for the prevention of influenza and gave the administrative measures for relief. In view of its timeliness, the bulletin is presented in full.

PREVENTION.

If it be admitted that influenza is spread solely through discharges from the noses and throats of infected persons finding their way into the noses and throats of other persons susceptible to the disease, then no matter what the causative organism or virus may ultimately be determined to be, preventive action logically follows the principles named below and, therefore, it is not necessary to wait for the discovery of the specific micro-organism or virus before taking such action.

I. Break the channels of communication by which the infective agent passes from one person to another.

II. Render persons exposed to infection immune, or at least more resistant, by the use of vaccines.

III. Increase the natural resistance of persons exposed to the disease, by augmented healthfulness.

I. Breaking the channels of communication:

(a) By preventing droplet infection. The evidence offered indicates that this is of prime importance.

(b) By sputum control. The evidence offered indicates that the danger here is due chiefly to contamination of the hands and common eating and drinking utensils.

(c) By supervision of food and drink. Evidence offered does not indicate much danger of infection through these channels.

Details and practical methods possible for the limitation of infection through droplets, sputum, and food and drink are discussed later under special preventive methods.

II. Immunization and vaccines.

(See the report of the laboratory committee appended.)

In the present epidemic vaccines have been used to accomplish:

1. The prevention or mitigation of influenza *per se*.

2. The prevention or mitigation of complications recognized as due to the influenza bacillus or to various strains of streptococci and pneumococci.

In relation to the use of vaccines for the prevention of influenza, the evidence which has come to the attention of the committee as to the success or lack of success of the practice is contradictory and irreconcilable. In view of the fact that the causative organism is unknown, there is no scientific basis for the use of any particular vaccine against the primary disease. If used, any vaccine must be employed on the chance that it bears a relation to the unknown organism causing the disease.

The use of vaccines for the complicating infections rests on more logical grounds, and yet the committee has not sufficient evidence to indicate that they can be used with any confident assurance of success. In the use of these vaccines the patient should realize that the practice is still in a developmental stage.

The committee believes that when vaccines are used experi-

mentally for the purpose of determining their preventive or curative value, the following conditions should be complied with:

1. The groups of vaccinated and unvaccinated persons should be the same in number.

2. The relative susceptibilities of the two groups should be equal, as measured by age and sex distribution, previous exposures to infection without development of influenza and a previous history as to recent attacks of the disease.

3. The degree of exposure in each group should be practically the same in duration and intensity.

4. The groups should be exposed concurrently during the same stage of the epidemic curve.

III. Increased natural resistance of persons exposed to Infection.

Physical and nervous exhaustion should be avoided by paying due regard to rest, exercise, physical and mental labor and hours of sleep. The evidence is conclusive, however, that youth and bodily vigor do not guarantee immunity to the disease.

The nature of the preventive measures practicable and necessary in any given community depends in a large part upon the nature of the community itself, as to population characteristics, industries, and so on, and upon the stage and type of the epidemic curve. For example, the measures to be adopted in a purely rural community would not be practicable or desirable in a large metropolitan area, nor would the measures desirable and feasible at the beginning or end of an epidemic be found those best adapted for the intervening period. The committee has found it impossible, therefore, to lay down any rules for the guidance of all health officials alike in preventive measures. The most it has been able to do has been to state certain general principles that in its judgment should underlie administrative measures for the prevention of influenza. The application of these principles to the needs of any particular community must be left for determination by the officers of that community who are responsible for the protection of its public health.

The preventive measures recommended by the committee are as follows:

A. Efficient organization to meet the emergency, providing for a centralized co-ordination and control of all resources.

B. Machinery for ascertaining all facts regarding the epidemic:

1. Compulsory reporting.

2. A lay or professional canvass for cases, etc.

C. Widespread publicity and education with respect to respiratory hygiene, covering such facts as the dangers from coughing, sneezing, spitting, and the careless disposal of nasal discharges; the advisability of keeping the fingers and foreign bodies out of the mouth and nose; the necessity of hand-washing before eating; the dangers from exchanging handkerchiefs; and the advantages of fresh air and general hygiene. Warnings should be given regarding the danger of the common cold, and possibly cold should be made reportable so as to permit the sending of follow-up literature to persons suffering from them. The public should be made acquainted with the danger of possible carriers among both the sick and the well and the resultant necessity for the exercise of unusual care on the part of everybody with respect to the dangers of mouth and nasal discharges.

D. Administrative procedures:

1. There should be laws against the use of common cups, and improperly washed glasses at soda fountains and other public drinking places, which laws should be enforced.

2. There should be proper ventilation laws, which laws should be enforced.

Since the disease is probably largely a group or crowd problem, the three following sub-heads are especially important.

3. **Closing.**—Since the spread of influenza is recognized as due to the transmission of mouth and nasal discharges from persons infected with influenza, some of whom may be aware of their condition but others unaware of it, to the mouths and noses of other persons, gatherings of all kinds must be looked upon as potential agencies for the transmission of the disease. The limitation of gatherings with respect to size and frequency, and the regulation of the conditions under which they may be held must be regarded, therefore, as an essential administrative procedure.

Non-essential gatherings should be prohibited. Necessary gatherings should be held under such conditions as will insure the greatest possible amount of floor space to each individual present, and a maximum of fresh air, and precautions should

be taken to prevent unguarded sneezing, coughing, cheering, etc.

Where the necessary activities of the population, such as the performance of daily work and earning of a living, compel considerable crowding and contact, but little is gained by closing certain types of meeting places. If, on the other hand, the community can function without much of contact between individual members thereof, relatively much is gained by closing or preventing assemblages.

Schools: As to the closing of schools there are many questions to be considered.

(a) Theoretically, schools increase the number and degree of contacts between children. If the schools are closed, many of the contacts which the children will make are likely to be out of doors. Whether or not closing will decrease or increase contacts must be determined locally. Obviously, rural and urban conditions differ radically in this regard.

(b) Are the children in coming to and going from school exposed to inclement weather or long rides in overcrowded cars?

(c) Is there an adequate nursing and inspection system in the schools?

(d) Is it likely that teachers, physicians and nurses can really identify and segregate the infected school child before it has an opportunity to make a number of contacts in halls, yards, rooms, etc.? We suggest that children suspected of having influenza and held in school buildings for inspection should be provided with and required to wear face masks.

(e) Will the closing of schools release personnel or facilities to aid in fighting the epidemic?

(f) If schools are kept open, will the absence of many teachers lower the educational standards?

(g) If a number of pupils stay at home because of illness or fear, will they not constitute a heavy drag upon their classes when they return?

(h) If schools are closed, is there likely to be an outbreak in any case when they are reopened?

Churches: If churches are to remain open, services should be reduced to the lowest number consistent with the adequate discharge of necessary religious offices, and such services as are held should be conducted in such a way as to reduce to a minimum, intimacy and frequency of personal contact.

Theaters: As regards theaters, movies, and meetings for amusement in general, it seems unwise to rely solely or in great part upon the ejection of careless coughers. In the first place it is difficult to determine who is a careless cougher, and after each cough, danger has already resulted. It seems, too, that the closing of theaters may have as much educational value as their use for direct educational purposes, etc. Discrimination as to closing among theaters, movies, etc., on the basis of efficiency of ventilation and general sanitation, may be feasible.

Saloons, etc.: The closing of saloons and other drinking places should be decided upon the basis of the probability of spread of the disease through drinking utensils and the conditions of crowding.

Dance halls, etc.: The closing of dance halls, bowling rooms, billiard parlors and slot-machine parlors, etc., should be made effective in all cases where their operation causes considerable personal contact and crowding.

Street cars, etc.: Ventilation and cleanliness should be insisted upon in all transportation facilities. Overcrowding should be discouraged. A staggering of opening and closing hours in stores and factories to prevent overcrowding of transportation facilities may be cautiously experimented with. In small communities where it is feasible for persons to walk to their work it is better to discontinue the service of local transportation facilities.

Funerals: Public funerals and accessory funeral functions should be prohibited, being unnecessary assemblies in limited quarters, increasing contacts and possible sources of infection.

4. Masks.—The wearing of proper masks in a proper manner should be made compulsory in hospitals and for all who are directly exposed to infection. It should be made compulsory for barbers, dentists, etc. The evidence before the committee as to beneficial results consequent upon the enforced wearing of masks by the entire population at all times was contradictory, and it has not encouraged the committee to suggest the general adoption of the practice. Persons who desire to wear masks, however, in their own interests, should be instructed as to how to make and wear proper masks, and encouraged to do so.

5. Isolation.—The isolation of patients suffering from

influenza should be practiced. In cases of unreasonable carelessness, it should be legally enforced most rigidly.

6. Placarding.—In cases of unreasonable carelessness and disregard of the public interests placarding should be enforced.

7. Hospitalization.—The theory of complete hospitalization is that, if all the sick were hospitalized the disease would be controlled. In certain somewhat small communities where hospitalization of all cases was promptly inaugurated the disease did come quickly under control. It must be recognized, however, that unless every infective person can be detected and identified as such and removed to the hospital before he has infected others, hospitalization can not be depended upon to eliminate the disease.

In general, home treatment is to be advocated where medical, nursing and other necessary facilities are adequate, and where home treatment is not directly contra-indicated by the danger of infecting others. The hospitalization in any case, mild or severe, should be undertaken only when facilities for home treatment are inadequate with respect to medical and nursing care or otherwise. The objection to routine hospitalization of mild cases lies in the fact that patients not already suffering from secondary infections may acquire them by exposure to hospital cases already so infected. The objection to the routine hospitalization of severe cases lies in the danger to the patient necessarily incident in the transfer from home to the hospital.

8. Coughing and Sneezing.—Laws regulating coughing and sneezing seem to be desirable for educational and practical results.

9. Terminal Disinfection.—Terminal disinfection for influenza has no advantage over cleaning, sunning and airing.

10. Alcohol.—The use of alcohol serves no preventive purpose.

11. Sprays and Gargles.—Sprays and gargles do not protect the nose and throat from infection, for the following reasons:

(a) So far as the knowledge of the committee extends, no germicide strong enough to destroy infective organisms can be applied to the nose and throat without at the same time injuring the mucous membranes.

(b) Irrigation of the nose and throat to accomplish the complete mechanical removal of the infective organism is impracticable.

(c) Their use tends to remove the protective mucus, to spread the infection and to increase the liability of actual entrance of the infective organisms.

(d) Their domestic use is liable to lead in families to a common employment of the same utensils.

(e) The futility of sprays and gargles has been demonstrated with respect to certain known organisms such as the diphtheria bacillus and the meningococcus.

Miscellaneous Considerations.

1. Colleges, asylums and similar establishments may with advantage enforce rigid institutional quarantine against the outside world, if they begin in the early stage of an epidemic, provided they are so located and conducted as to render the procedure reasonably likely to be effective, even temporarily; for even temporary success will postpone the appearance of the disease, if it appears at all, to a time when the patients will be more likely to be able to have adequate medical and nursing care.

2. The recommended measures for control, even if they do not accomplish the desired end, should at least be instrumental in distributing the epidemic over a longer period of time, which in itself is highly desirable.

3. The statistics of the disease and the keeping of proper records are extremely important. The lack of knowledge regarding innumerable factors in reference to the disease makes all the more desirable complete case records, etc.

4. The committee wishes to emphasize the need for the complete statistical study of the collected data on the mortality, morbidity, case fatality, duration, economic aspects, and therapeutics of the disease. Through the collection of the facts in a uniform manner, and through the analysis of such tabulated data, especially mathematical graduation, and testing and study of the figures, important contributions to the natural history and typical characters of the disease may be expected. General principles as to the etiology, fatality and practical management of influenza may follow from the extensive survey of the epidemic in the statistical laboratory as well as from the intensive bedside observation of single cases of the disease.

5. The measures recommended are calculated to be effective

in the promotion of respiratory hygiene in general and particularly in the control of pneumonia and other respiratory infections.

Administrative Measures for Relief.

The committee on administrative measures for relief would submit the following considerations as constituting a summary of the important measures for meeting epidemic conditions:

I. General Rules.

1. Compulsory reporting.
2. Isolation, by co-operation and education, to a point where it does not diminish the willingness of the physician to report.
3. Placarding would seem to be subject to the same limitations as is isolation.
4. The closing of schools, prohibition of funerals, etc., being preventive measures, are not touched upon in this report, except to mention that the closing of many agencies will release medical, nursing, and volunteer services for special influenza work.
5. It may be necessary to grant authority and power to the health authorities to administer relief.

II.—Preliminary Measures.

1. The listing and distribution of resources, including physicians, nurses, social workers, nurses' aids, clerks, domestics, laundresses, automobiles, chauffeurs, mask makers and volunteers of all kinds.

All available publicity channels should be used to promote volunteer service.

An appeal should be made for voluntary donors of human blood serum from convalescent influenza patients, to be held in readiness for use in treatment.

2. The centralization of resources, under one control, with central and branch headquarters, the city being districted for medical, nursing and other work.

The central headquarters should be ordinarily under the supervision of a board representative of the most important agencies concerned, the board's work to be administered through a manager (presumably the health officer) selected for his fitness.

3. The service should be maintained on a 24-hour basis, and a system of outgoing and incoming telephone service is essential.

4. The local authorities should get and keep in touch with state and national agencies.

III. Current and Continuous Analysis of Case Situation.

1. In the smaller communities a canvass should be made of all physicians, soliciting information as follows:

- (a) Number of cases under care.
- (b) Number of cases needing hospital treatment.
- (c) Number of cases needing home nursing care.
- (d) Number of cases requesting medical service but not reached.

This information will indicate the situation as regarding the need for emergency nursing and medical service, and should be acquired as fully as possible in larger communities, through various agencies such as a current lay or police canvass of homes, etc. The continuous classification of cases according to these groupings is of practical value.

IV. Analysis, Augmentation and Organization of Principal Facilities.

(A) Field Nursing.

1. Ordinarily nursing facilities utilized in general public health work should be diverted to meet the epidemic situation, and should be used on a district basis, with all other available facilities, under one supervision.

2. Nursing assistants, volunteers, etc., should be used wherever possible in homes and institutions, under expert supervision, after classification and assignment on a basis of minimum standards as to fitness, and such intensive training in the care of influenza and pneumonia patients as may be feasible.

3. From the standpoint of the patient, home treatment is to be advocated, if medical, nursing, disease preventive and other facilities are adequate.

4. Restriction so far as possible through the pressure of public opinion should be brought against the unnecessary use of private nurses.

5. Automobile transportation should be provided, and the nursing service used to encourage isolation and education.

6. Special record forms are essential for this and the medical work, and a special sub-committee is proposed to meet this problem.

7. Provision as to housing and care should be made for out of town nurses.

8. We recommend further training with reference to influenza for all graduates of Red Cross Home nursing courses and more extensive use of their services. This would necessitate frequent and careful registration (names, addresses and telephone numbers) and further information regarding personal health, age and ability and willingness to serve.

(B) Emergency Medical Service.

1. The medical service should be handled through the central office, the physicians being responsible to the central office, though perhaps assigned to district offices.

2. In this emergency service there should be utilized all available physicians such as school and factory physicians, volunteers, practitioners on a paid basis, fourth year medical students, etc. This service should cover all calls reported as unreached by private physicians or received through other channels, and should be co-ordinated with the special nursing service, being provided with automobile transportation, machines being hired if necessary.

3. The emergency medical service should be used to select cases needing hospital care.

4. It may be feasible to institute a central clearing house in certain districts for private physicians' calls.

5. An arrangement should be made through the medical licensing board for the granting of temporary permits to practice to reputable physicians from out of the state, at the request of the Central Influenza Committee.

6. In some localities it may be feasible to district the local practitioner and to have him meet special calls on a part time basis for adequate compensation.

7. Certain of the relatively non-essential specialties should be discouraged, and the physicians in those specialties urged to volunteer for emergency district work. This type of service may be operated on a pay or free basis.

8. Presumably some effort should be made, through an authoritative medical commission, to suggest standard methods of treatment, and wise limitations as to therapeutic procedure.

(C) Hospital Facilities.

1. It is essential that the facilities, if possible, be kept ahead of the demand. A daily canvass should be made and data collected regarding available beds, medical and nursing needs, domestics, food, cots, supplies, etc. A regular visit by an inspector will probably prove more effective than an attempt at telephone communication.

2. Under most conditions a central clearing house, covering most if not all of the hospitals, is advisable for the admission of cases. Through this channel the severer cases may receive first consideration. Owing to constant changes in the hospital bed situation, the daily canvass of facilities may not be wholly depended upon; on the contrary, it may usually be necessary to telephone the hospital in order to make sure regarding the admission of a particular case. In any event the hospitals, if facilities are inadequate, should be impressed with the necessity for admitting only the most severe or needy cases, pay or free. Special hospital arrangements should be provided for pregnant women.

3. It is advisable to add wards or tents or new equipment to existing institutions rather than to establish entirely new emergency hospitals. If practicable, certain hospitals may be urged to handle influenza cases exclusively.

4. Non-emergency surgical and chronic medical cases amenable to home treatment should be dehospitalized.

5. A convalescent home, if adjacent to the hospital, may serve for the care of mild and convalescent cases, thereby increasing the space in the hospital for acute cases, obviously involving an increase in the nursing facilities.

6. A canvass of ambulance facilities should be made, ambulances being requisitioned with payment, or hired by contract, if necessary. Automobiles and motor trucks should be potentially mobilized for this purpose. Frequently military equipment may be used if accessible.

V. Social and Relief Measures.

1. The central office should keep the family advised regarding the patient, thereby saving telephone calls, trolley fares and worry on the part of the family, and thereby increasing the willingness for hospitalization.

2. Volunteer workers such as Red Cross volunteers, teachers, relatives, etc., should be placed in care of families where the responsible members are dead or hospitalized, this service being under expert social supervision, and the families in touch with the supply system. Supervision of placed-out children is also necessary.

3. Homes should be investigated before patients are dis-

charged into them, when destitution or other untoward circumstances are apparent.

4. Precaution should be taken that institutions and families too busy with the influenza situation to look after their own needs, are covered by the general relief measures.

5. Ordinary charitable relief should be handled through the routine agencies, the service co-ordinated with the other epidemiological measures. Churches, lodges, etc., should be urged to handle their own cases, in order to relieve the pressure on the central agency. Aid should be immediate, without protracted investigation.

6. Recreation facilities (motoring, etc.), should be provided for the physicians and nurses while off duty.

VI. Food.

1. Available central cooking facilities should be used so far as is necessary, such as the dietetic equipment in high schools, normal schools, colleges, etc., with a delivery system to families and institutions in need.

2. Individual families should be encouraged to cook additional amounts, the same to be delivered to central diet kitchens for distribution, a standard list of prepared foods needed being devised and advertised, with recognition of racial customs and preferences.

3. It may be necessary to establish canteens in sections of the city.

VII. Laundry.

1. A special collection and distribution system may be essential both for homes and institutions.

2. It may be necessary to take over a public laundry with compensation, or a private non-medical institution laundry.

VIII. Provision for Fatalities.

1. Death reporting should be prompt (24-hours) and a record kept so as to insure prompt disposal of bodies.

2. A daily canvass of available coffins should be made, labor assured for construction, and possibly no coffins sold without the permit of the Influenza Administration Office.

3. If morgue facilities are inadequate a central place should be provided, with embalming facilities, for the temporary disposal of bodies.

4. A canvass of hearses should be made and regulations issued prohibiting unnecessarily long hauls, insisting on maximum capacity loads, etc. A central control will prevent unnecessary duplication as to routes, etc.

5. A reserve supply of trucks and automobiles should be at hand for use in various ways in connection with the handling of fatal cases.

6. The number of graves required should be estimated and labor released from public works or secured through other channels (possibly military) for digging. Possibly temporary trench interment may be necessary.

IX. Education, Instruction and Publicity.

Literature and special instructions will be necessary on many phases, including the following:

1. Instructions to physicians as to reporting, facilities available, district arrangements, etc.

2. Advice to physicians regarding treatment standards and suggestions.

3. Instructions for families, to be distributed by nurses, physicians, social workers, druggists, etc., covering the problems of care during the physician's absence.

4. Instructions to the public as to where aid may be secured, to be printed in various languages, and distributed by druggists, displayed in street cars, used in the press, etc.

5. Instructions for families on "What to do till the doctor comes."

6. Instructions to physicians, factory managers, school superintendents, etc., urging the necessity for immediate home and bed treatment at the first sign of respiratory disease.

7. Popular literature on the essentials of adequate care, the danger of returning to work too soon, etc. Popular press space is worth paying for, if it cannot be secured otherwise.

8. Popular publicity as to legitimate medical, nursing, undertaker, drug, and other charges, to prevent profiteering.

X. Miscellaneous.

1. The co-operation of pharmaceutical agencies should be secured to insure an adequate supply of drugs and druggists.

2. Influenza victims and their families should have "first call" on fuel deliveries.

3. While follow up procedures are not legitimately a factor in the epidemic situation, their consideration is essential to an adequate meeting of the entire problem. This means adequate provision for medical examination and nursing care, relief measures, industrial employment problems, the follow up of special sequelae such as cardiac affections, tuberculosis, etc.

4. It is finally suggested that Health Department draw up a program based on the above outline, holding it in reserve for future use, if not immediately needed, and modifying the proposal to fit the size and other characteristics of the particular community.

The Physician's Library

Principles and Practice of Infant Feeding. By Julius H. Hess, M.D., Major M.C., U. S. Army; professor and head of the department of pediatrics, University of Illinois; chief of pediatric staff, Cook County Hospital; attending pediatrician to Cook County, Michael Reese and Englewood Hospitals, Chicago. Philadelphia: F. A. Davis Company. 1918.

The demand for modern books on infant feeding in recent years has been large. Especially does this refer to the ever-changing methods. While formerly top milk feedings were the rule, the profession soon found out that the weak stomach could not assimilate the high fat content in many cases. One point that we have learned in infant feeding is that we must individualize our feeding methods. Hard and fast rules that apply equally well to all cannot be made. One infant will thrive on a four-ounce feeding while another of the same age and apparently of the same development will thrive on a three-ounce formula. Whole milk modification, and where this is not well-borne, skimmed milk should be used as a first formula.

This work is divided into five parts and an appendix. In Part I we find discussed the anatomy of the digestive tract, the physiology of the digestive tract, the metabolism of fat, carbohydrate, proteins, salts, water, lipoids, and the chemistry of milk digestion. The author deals with some very important tests on the constituents of feces. On page 22 the following five tests are worthy of note.

"1. Fat soap easily seen as fatty acid crystals (needles) by heating with acetic acid on the cover glass and allowed to cool.

"2. Carbol-fuchsin in weak solutions stains as follows: Neutral fat: no stain. Soaps: faint rose color. Fatty acids: red.

"3. Sudan III stains as follows: Neutral fat: orange red. Soaps: crystals do not stain. Fatty acids: stain red or crystals, orange red.

"4. Sugar is not demonstrable in any quantity as such, but the character of the fat soap stool seen in milk feeding without sugar is changed to a softer, smaller, and normal color by adding sugar.

"5. Starch is demonstrable by iodine test microscopically, but care must be exercised in the interpretation of the test, as the starch may be derived from baby powders."

Any student desiring bio-chemistry, physiological chemistry, and a thorough knowledge of the metabolism of the food constituents should carefully read this part as it is exhaustive and up to date.

Part II deals with maternal feeding, wet nursing, nutritional disturbance in the breast fed, mixed feeding, overfeeding and underfeeding. In this part we deal with common sense methods of nursing rather than the haphazard methods of feeding whenever the baby cries. The author advises that the baby be fed every four hours at the breast, six feedings in twenty-four hours from birth until the second month. By the second to the fifth months he advises five breast feedings in twenty-four hours. Night nursing can frequently be discontinued from 10 p. m. until 6 a. m. without anything but a drink of water. This method applies to normal babies only. If the baby is premature or delicate, or if a tendency to vomit exists, ten smaller meals and frequent intervals are advised.

The baby should be awakened if it is feeding time. One breast is sufficient to give a meal to the average baby. Alternate breasts should be used in successive feedings. If an infant is dissatisfied it may be necessary to give both breasts at each feeding. A robust baby takes three-fourths of the milk obtained from a good breast in the first five minutes of a twenty-minute nursing.

The wet nurse question is very carefully considered. The method of examination of a wet nurse with special reference to the milk, her teeth (pyorrhea), psychic disturbance and epilepsy, insanity should be looked into. A Wassermann reaction should be taken in all cases. Cold, cough and glands with suspicion of tuberculosis should be thought of before accepting

(Continued on ad. p. 22)

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Bromide-Preparation

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ANTI-EPILEPTIC
MILD HYPNOTIC**

SEDOBROL "ROCHE"



Procurable
from druggists.

TINS OF 10, 30, 60, 100
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Tablets each containing 17 Grains
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The Management of an Infant's Diet

In extreme emaciation, which is a characteristic symptom of conditions commonly known as

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it is difficult to give fat in sufficient amounts to satisfy the nutritive needs; therefore, it is necessary to meet this emergency by substituting some other energy-giving food element. Carbohydrates in the form of maltose and dextrins in the proportion that is found in

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are especially adapted to the requirements, for such carbohydrates are readily assimilated and at once furnish heat and energy so greatly needed by these poorly nourished infants.

The method of preparing the diet and suggestions for meeting individual conditions sent to physicians upon request.

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Peroxide — Non-toxic — Non-irritant

Will prove an effective and safe Prophylactic now and in the damp, cold winter months to come.

The United States and National Standard Dispensatories describe the properties of Alphozone.

Prescribe through your druggist or write for further information and experimental quantities to

Frederick Stearns & Co.,

Detroit, Mich.

"In Business More Than 60 Years"

(Continued from text p. 26)

a wet nurse. The exercise of the wet nurse is considered as an important topic for consideration if proper lactation is to follow.

In discussing the stool of a breast-fed infant the author describes the yellowish stool which always clings to the diaper. He also describes variations in the stool of a breast-fed infant in which white or yellowish fat curds, an excess of mucus, green color, which, however, is perfectly consistent with a normal growth and well being of the baby and should never in itself be a cause of worry or an indication for a change of food.

The premature infant is carefully considered and likewise its method of feeding. The author lays stress on the careful consideration of syphilis in all premature infants, and while every practitioner should know it, it is nevertheless frequently overlooked.

There are many methods of feeding described in detail so that the application of one or the other method to individual requirements is given. Sodium citrate and its use in modifying the curd, the uses of cereal, and the modern method of giving vegetables early during the first year, because the author believes that the vegetable juices containing the inorganic salts are necessary for bone metabolism. Orange juice is advised as early as the second or third month. The vegetables advised at the ninth month are spinach, carrots and turnips.

There are a number of illustrated charts and record sheets taken from the author's large experience at the Sara Morris Hospital for Children.

In this book containing over 300 pages one finds in addition to feeding, hygienic supervision of the bottles, nipples, care of the food in traveling, the bathing, supervision of the diaper, the latter one of the most common sources of infection and irritation between the thighs. We congratulate the author in having given the profession one of the most practical guides to infant feeding.

L. F.

Gynecology. By William P. Graves, M. D., Professor of Gynecology at Harvard Medical School. Second Edition, 883 pages with 490 original illustrations, 100 of them in colors. \$7.75 net. Philadelphia and London: W. B. Saunders Company, 1918.

This book is in three divisions. The first is devoted to the physiology of the pelvic organs and the relationship of gynecology to the general organism.

The second is intended for the student beginning the study of the subject and part three covers the technic of gynecologic surgery.

Particular attention is paid in this edition to the advances in the specialty during the last year. Internal secretions and their connection with gynecology is a topic of real interest and other subjects which add to the value of the new edition are the relationship of gynecology to the sex impulse, ovarian organotherapy, ovarian transplantation, the radium treatment of cancer and radium therapy in non-malignant diseases of women. The author also describes a number of new operations. Considerable space is devoted to operations upon the kidney, bladder, ureter and rectum which, we believe, properly belong to the urologist and proctologist. However, many gynecologists claim the entire abdominal cavity as the scene of their operative endeavors.

The book is a splendid production. Every subject is well presented in text and illustration and very little is left to be desired from any standpoint.

Diseases of Infancy and Childhood. By Henry Koplik, M.D. 4th edition. \$6.00. Philadelphia and New York: Lea and Febiger, 1918.

The striking features of this edition include acidosis in infancy, more facts on infant feeding, infectious diseases, new thoughts on syphilis, tuberculosis and circulatory diseases.

These additions make an already excellent book better and result in one of the most complete treatises on pediatrics in the field.

This work is characterized by unusual clearness of diction and comprehensiveness of clinical detail.

The Orthopedic Treatment of Gunshot Injuries. By Leo Mayer, M.D. \$2.50. Philadelphia and London: W. B. Saunders Company, 1918.

The author says this is not a treatise on orthopedic surgery, but is an exposition of "certain principles and rules of guidance in the treatment of war injuries" which have been of value to him. He classifies the treatment of war injuries under two groups, at the front, where the problem of proper fixation of the injured part and at the base hospital, where the surgeon must determine the proper time to discontinue fixation and restore motion.

(Continued on p. 24)

SURGEON'S SOAP

It is slightly antiseptic.

It is especially effective for cleansing the hands, face, and hair.

It is put up in collapsible tubes of pure tin so that it may be easily carried about in a physician's bag.

It is—in other words—



The Soap for Surgeons

Surgeon's Soap is a new product. If your dealer does not carry it, send us his name and address. We will mail you a sample tube free.

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Sample Pamphlet to Physicians on request

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ST. LOUIS, MO., U. S. A.

(Continued from p. 22)

With these points in view Mayer has built up an interesting and instructive book, one which will be particularly useful in this period of human reconstruction.

Physiology for Nurses. By William G. Christian, M. D., and C. C. Haskell, M.A., M.D., of the Medical College of Virginia, Richmond. \$1.75.

Surgical and War Nursing. By A. H. Barkley, M. D., at Good Samaritan Hospital Training School for Nurses, Lexington, Ky. \$1.75.

Dietetics for Nurses. By Maud A. Perry, B. S., Red Cross Dietitian for Base Hospital Unit No. 14. \$1.25.

Nursing in Diseases of Children. By Carl G. Leo-Wolf, M.D., Chief of Clinic for Sick Babies and Children for Health Department of the City of Buffalo. \$2.50.

Hygiene for Nurses. By Nolie Mumey, M. D., Lecturer in Hygiene, Chemistry, and Bacteriology, Logan H. Roots Memorial Training School for Nurses. \$1.25. St. Louis: C. V. Mosby Co., 1918.

This series of books will prove of great value to training schools and individual nurses, as the little volumes cover the fields very thoroughly. The series is warmly commended to those interested in nursing.

Progressive Medicine, Vol. XXI, No. 3. Edited by H. A. Hare. Philadelphia and New York: Lea & Febiger, 1918.

This number contains the following splendidly covered reviews: Diseases of the Thorax and its Viscera, including the Heart, Lungs and Bloodvessels, by William Ewart; Dermatology and Syphilis, by William S. Gottheil; Obstetrics, by Edward P. Davis, and Diseases of the Nervous System, by William G. Spiller.

Medical Vocabulary. By Joseph Marie, 50c. Philadelphia: P. Blakiston's Son & Co., 1918.

The value of this book is the French, Italian and English vocabulary, together with various metric tables. It will be very useful to Americans in Europe.

Interpretation of Dental and Maxillary Roentgenograms. By Robert H. Ivy, M.D., D.D.S., St. Louis: C. V. Mosby Co., 1918.

Of value in diagnosing pathologic conditions about the teeth and maxillaries by the use of the x-ray. The text is enlightening and the illustrations which are negative reproductions are of unusual value.

Headaches and Eye Disorders of Nasal Origin. By Greenfield Sluder, M.D., of Washington University. St. Louis: C. V. Mosby Co., 1918.

This book will reveal many a cause of trouble which has seemed wrapped in obscurity. It opens up a new field for diagnostic assistance and is of real assistance to the practitioner.

Military Surgery of the Zone of the Advance. By Maj. George de Tarnowsky, M. C., U. S. A. \$1.50. Philadelphia and New York: Lea & Febiger, 1918.

This is medical war manual No. 7 and describes briefly but clearly all the considerations of the broad subject. Among the chapters are those devoted to the French and British advance zones, traumatic shock, hemorrhage, wounds of soft tissues and general treatment of wounds, gas bacillus gangrene, tetanus, wounds of location and special organs, gas poisoning and trench foot.

Abstracts of War Surgery. St. Louis: C. V. Mosby Co., 1918. \$4.00.

The war literature of general surgery was collected under such heads as wound infection, tetanus, gas gangrene and surgery of the abdomen, chest, joints, jaws and face. There are also chapters devoted to fractures, burns, trench foot, foreign values and peripheral nerve injuries.

Helminths.

In a report on an ankylostome inquiry in the Darjeeling District, Clayton Lane states that neither beta-naphthol, nor eucalyptus, chloroform, and castor-oil mixture have proved as efficient as thymol for expelling the worm. The standard dose of thymol for adult adopted was one drachm of thymol, divided into three portions administered at intervals of one hour. The one course of thymol cannot be expected to expel more than 60 per cent. of the worms present.

Oil of chenopodium, which has acquired a considerable repu-

tation in America, of which country it is a product, was not tried as it could not be procured (see also under "Amoebic Dysentery").

Hilario and Wharton give a good account of a rare fluke, *Echinostoma iloacanum*, which was first found by Garrison in Manila in 1907. Five cases were met with harboring this intestinal parasite (the type species of the genus *Echinostoma* is *E. echinatum*, met with in domestic ducks and geese).

The fluke in length varies from about 4 mm. to 7.8 mm., and in breadth from about 1 mm. to 1.6 mm.; on account of its small size it is difficult to detect in the stools, particularly as it is little pigmented but is transparent and grey. It has a ventral sucker in front of which is the head region with an oval sucker, sub-terminal in position, and a wreath of oral spines, 30 to 50 in number may surround the mouth and oral sucker, but they are very unstable and are liable to be almost entirely lost. The cuticle may be smooth or may be more or less covered with scale-like spines, which are very unstable and liable to be lost. The ova have a thin shell with operculum at the smaller end, and are not segmented when passed; they measure 89-111 microns in length and 53.5 to 82 microns in breadth. The symptoms presented by the cases were anemia with occasional headache and dizziness. No definite pathological changes have been found.—(Practitioner.)

New Treatment for Tuberculosis.

The worth of garlic as a medicine has been tested most thoroughly—experimentally and clinically—in tuberculosis. Dr. Giulio Cavazzani published in "Il Policlinico", April, 1901, an account of favorable results he had obtained in the treatment of phthisis by garlic. These favorable experiences were confirmed by Dr. Piccinini in 1901, by Dr. L. Sacchi in 1902, by Dr. G. G. Deplano in 1903, who claimed to have cured pulmonary tuberculosis by the use of garlic, and by Dr. B. Denti in 1903, who published a paper in the "Gazzetta Internazionale di Medicina," on the radical cure of pulmonary tuberculosis by garlic.

The object has been to discover a garlic or plant of the garlic family which, containing the essential oil of like therapeutic properties to that of *Allium Sativum*, at the same time when injected does not vesiculate or irritate. The ideal product has been discovered in the *Allium Cepa Villosa*. From this plant has been expressed Propyl-allyl-trisulphide, which from the therapeutic standpoint is stronger than the products of *allium sativum* and can be injected intra-muscularly without causing vesication or any inconvenience.

In itself, Propyl-allyl-trisulphide is the most effective remedy for tuberculosis. Its curative properties, however, have been reinforced and amplified by its combination with Guaiacol, which has been termed, and with much truth, "the king of remedies" for tuberculosis. These ingredients have been combined with sterile basic oils, and the whole compound given the name of Amen.

The indications for Amen, which should always be injected intra-muscularly, are pulmonary diseases, chronic bronchitis, tuberculosis, broncho-pneumonia, tuberculosis of the lungs, polyadenitis, scrofula and tuberculous affections of the skin and bones. The Amen treatment is endorsed by many physicians, including Dr. W. M. McDuffie of New York, who was a pioneer in this country in the use of garlic oil for tuberculosis. For further information address Nema Chemical Laboratories, 6 Cliff Street, New York, George J. Wallau, U. S. Distributors, who will be pleased to forward detailed literature concerning the Amen treatment.

Traumatic Luxation of the Sacroiliac Symphysis, Without Fracture of the Pelvis.

J. A. Simpson reports a case of luxation of the sacroiliac symphysis combined with separation at the symphysis pubis, in which reduction was accomplished by use of the Hawley table and applied traction, and secured by wiring and by an adhesive plaster band, over which a cast was applied.

Only eleven well authenticated cases have been reported. Diagnosis of this condition with the x-ray is easy; without it, difficult and uncertain.

On the affected side shortening of the limb is noted when measured from the umbilicus, and no shortening when measured from the anterior superior spine, this resulting from release of the innominate bone from its attachments to the sacrum.

The limb is externally rotated, with toes everted.

Severe shock attends this condition. The injury to the viscera and blood-vessels is the chief cause of death, the bladder being wounded most often.—(Ann Surg.)



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But those "other things"—they are equally essential.

For instance:—the selection of the most soluble, least irritating form of drug; the delicate adjustment of the diluent to suit each drug or combination.

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SHERMAN'S Influenza Vaccine No. 38

Will abort Colds, Grippe, Influenza and Pneumonia.

Each Mil. Contains

Influenza B, strains from present epidemic and others	200,000,000
Streptococci, many haemolytic and other types	100,000,000
Pneumococci, type 1, 2, 3 and 4, in proper proportions	100,000,000
Micrococcus Catarrhalis, leading members of the group	200,000,000
Staphylococcus Albus, many strains	200,000,000
Staphylococcus Aureus, many strains	200,000,000

This Vaccine is also used with success in the prophylaxis of these diseases.

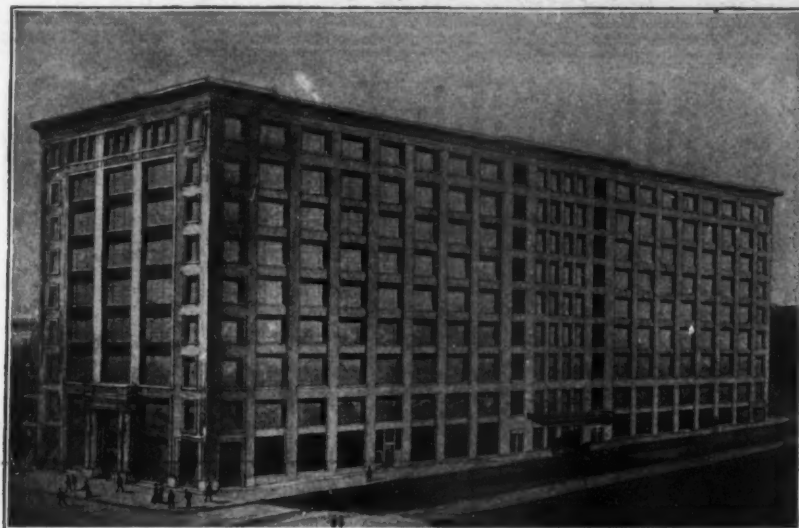
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Having outgrown their present Pharmaceutical Laboratories, the H. K. Mulford Company have purchased and will soon occupy the modern building, located at Broad, Wallace and Fifteenth Streets, on Philadelphia's main thoroughfare, six blocks north from City Hall.

The building is of modern construction, being fireproof throughout, of steel, concrete and stone, nine stories in height and has a total floor space of nearly ten acres.

All equipment is of the latest type used in building construction and includes four electric passenger elevators, four electric freight elevators, with a capacity of twelve tons; four enclosed fire towers for the safety of the occupants; electric generating machine; mail chutes; artesian wells, etc., etc.

The structure will be further equipped with modern labor-

saving devices and when occupied will house the general offices and the drug, chemical and pharmaceutical departments which are now distributed over a number of buildings in several locations.

This will be the largest building in the world devoted exclusively to the production of medicinal products. It will be a worthy peer of the Mulford Biological Laboratories, located at Glenolden, Pa., which are recognized as the largest and most complete in existence.

The rapidly increasing business at home and abroad has necessitated this expansion and the new premises will enable the H. K. Mulford Company to fulfill the long cherished aim of making the *Mulford Standard of Service* equal the *Mulford Standard of Quality*.

Anasarcin.

Since the effusion of fluid into the tissues is due primarily to circulatory stasis, it is rational to assume that the strength in the heart action and to increase the fluid output from the kidneys as well as the salts from the blood, is the proper method. Anasarcin does this. It is known that certain active principles of squill possess the property of controlling cardiac action, stimulating that organ through the cardiac ganglia, inhibiting the pneumo-gastric fibres that supply the heart, dilating the arterioles, and stimulating the kidney to increase the fluid and salt excretion. The action of these active principles, scillipicridin, and scillitoxin is enhanced and increased by the action of oxydendron arboreum and sambucus canadensis.

Such a combination has been approved by Professor Hare and others, and under the name of Anasarcin Tablets, is used by a large number of physicians.

Anasarcin Tablets, therefore, should be employed in the treatment of dropsy, and will also be found of great service in the treatment of cardiac neurosis and in exophthalmic goitre.

Samples of Anasarcin Tablets and literature regarding them will be sent to any physician on request to: Anasarcin Chemical Co., Winchester, Tenn.

Alkalol in Inflammation of Mucous Membranes.

It is coming to be pretty generally appreciated that it is infinitely easier to work with Nature in the treatment of disease than to attempt to force her hand, by methods which on the surface may appear ultra-scientific, but practically leave much to be desired.

The treatment of inflammation of mucous membranes is a case in point. To drench a mucous membrane with acid solutions with the idea of producing an antiseptic effect, succeeds in increasing inflammation, and in most instances does not destroy pathogenic organisms. On the other hand, prolonged douching or washing of an inflamed mucous membrane with an alkaline solution over-stimulates the cells, produces a catarrh of secretion, and thus defeats Nature's best means for subduing the inflammation. The best antiseptic for any mucous membrane is the normal unimpaired secretion of its glands. The most

rational way in which to attempt to restore such a secretion to normal, is to feed it. Physiological agents when supplied in such a way as to enable them to be passed into the cell, go far toward replacing and replenishing the normal supply of such physiological agents which hypersecretion, induced by inflammation, exhausts or reduces to a marked degree. In other words, the solution that is hypotonic, provided it contain the proper physiological elements, helps Nature, because it reverses the osmotic current and passes into the cells material which is needed by the latter to enable them to prepare and to secrete their normal product. This is the reason why Alkalol proves such a satisfactory agent in the treatment of mucous membrane irritation. An inflamed eye, a congested or irritated throat, a severe attack of rhinitis are all indications for the use of Alkalol.

This agent also is invaluable in the treatment of cystitis, vaginitis, irritation of the urethra, etc.

Alkalol is also invaluable as a wet dressing or as an application in irritation or inflammation of the skin.

The action of Alkalol may be summed up by saying that Alkalol helps the cells to help themselves. That this is a fact has been demonstrated by the many physicians who, having tried it, continue to employ it with increasing frequency. Any physician who has not yet satisfied himself as to the practical value of Alkalol should write for literature and samples of the product to the Alkalol Co., Taunton, Mass.

The Care of the New Born Infant.

As a practical aid to the proper care of the new-born infant the Johnson First Dressing Packet for Infants has met the hearty approval of the medical profession. Simple and compact, each Packet contains everything necessary for the proper dressing of the cord, the cleansing and disinfecting of the eyes, mouth, etc., and safeguarding the baby against infection. They are obtainable of all druggists or physicians supply houses.

Extra systoles may produce tachycardia, bradycardia, an irregular pulse or an alternating one.